ORDER NO. EMID951574
A4

Service Manual

PCM Digital Piano

SX-PX203/203M

(M), (MC), (XM), (EN), (EH), (EF), (EZ), (EW), (EA),
(EP), (EK), (XL), (XR), (XS), (XD), (XT), (X), (XP)

AREAS

(M): U.S.A.
(MC): Canada
(XM): Mexico
(EN): Norway, Sweden, Denmark, Finland
(EH): Holland, Belgium
(EF): France, Italy
(EZ): Germany
(EW): Switzerland
(EA): Austria
(EP): Spain, Portugal, Greece
(EK): the United Kingdom
(XL): New Zealand
(XR): Australia
(XS): Malaysia, Singapore, South Africa
(XD): Saudi Arabia, Hong Kong, Kuwait
(XT): Taiwan
(X): Thailand, Indonesia, Iran, U.A.E., Panama, Argentina, Peru, Brasil
(XP): Philippines

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

■ Specifications

KEYBOARD	88 KEYS (MAX. POLYPHONIC 32 NOTES)
SOUNDS	GRAND PIANO, UPRIGHT PIANO, E PIANO 1, E PIANO 2, HARPSI, PIPE ORGAN
PEDAL	SOFT/SOSTENUTO, SUSTAIN
DIGITAL CELESTE	○
DIGITAL REVERB	○ (ROOM, STAGE, HALL)
TOUCH SENSITIVITY	LIGHT, NORMAL, HEAVY
TRANSPOSE	G–C–F#
TUNING	427.3–440.0–453.0 Hz
SEQUENCER	TRACK (1, 2), STORAGE CAPACITY: APPROX. 4000 NOTES, RECORDING MODE: REAL TIME
DEMO	○
MIDI	MULTI TIMBRE, LOCAL CONTROL, OMNI ON, PROGRAM CHANGE, TRANSPOSE
MODE SET	PIANO TUNING, MINIMUM RANGE, SOSTENUTO
OTHERS	POWER SWITCH, MAIN VOLUME, MIDI TERMINALS (IN, OUT, THRU), PEDAL IN, AUX IN (R/R+L, L), LINE OUT (R/R+L, L), PHONES ×2, AC IN, INITIAL KEY
OUTPUT	25W × 2
SPEAKERS	14 cm × 2
POWER REQUIREMENT	145 W, 90 W (NORTH AMERICA AND MEXICO) AC 120/220/240 V 50/60 Hz AC 120 V 60Hz (NORTH AMERICA AND MEXICO) AC 230 V 50/60Hz (NEW ZEALAND) AC 230-240 V 50/60Hz (EUROPE)

Technics

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DIMENTIONS (W X H X D)	137.3 cm X 100.3 cm X 49.0 cm (54-1/16" X 39-1/2" X19-9/32")
NET WEIGHT	49.3 Kg (108.7 lbs)
ACCESSORIES	MUSIC STAND, AC CORD, STAND

*Specifications are subject to change without notice for further improvement.

WARNING

To prevent the risk of fire, smoke, or electrical shock and to ensure safe operation, please be sure to follow the safety guidelines below.

1. At places where special caution is required, the necessary safety precautions are clearly labeled or printed, for example, on the cabinet, or on the part concerned. Please follow these safety precautions, and also those listed in the Owner's Manual.
2. Parts which have a ⚠ mark in the circuit diagram or in the parts list are essential for safety. When replacing these parts, be sure to use only the specified parts.
3. Use the specified types for internal wiring (double-insulated wiring, etc.).
4. When replacing parts on the AC primary side (power transformer, electric switch, electrical cord, noise-prevention condenser, etc.), wind the lead wire and secure it by soldering.
5. Do not let the wiring come into contact with heat-emitting devices (fuse resistor, radiator plate, etc.).
6. When replacing the wiring, make sure that it is not in contact with the unfinished or rough edge of a part.
7. When replacing the power cord (except for the plug-in type), tug it from various directions to confirm that it does not slip out of place.
8. Spacing
   If soldering was done on the AC primary circuit, confirm that the interval between the soldered terminals or between the terminal and surrounding metallic parts is at least the minimum required (Between the primary circuit and the chassis: at least 6.5 mm; between primary circuit terminals: at least 4.0 mm; between primary circuit terminals and secondary circuit terminals: at least 6.5 mm.).

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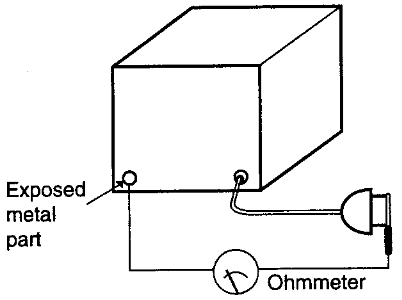
SAFETY PRECAUTION

● Safety Precaution

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only the manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc..
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

● Insulation Resistance Test

1. Unplug the power cord and short the prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screw heads, connectors, control shafts, handle brackets, etc..Measurements should range from 4 MΩ to infinity for all exposed parts.

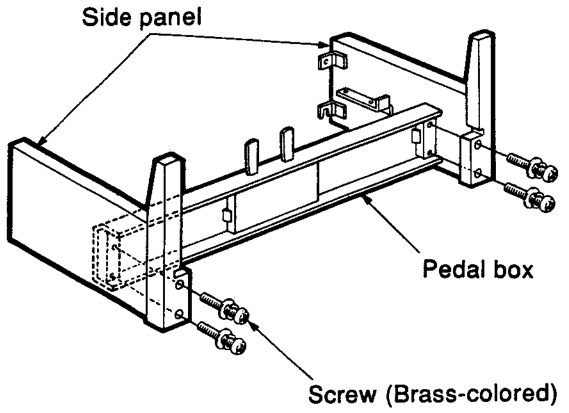

Exposed metal part
Ohmmeter

Resistance = 4MΩ to ∞

HOW TO ASSEMBLE THE PIANO

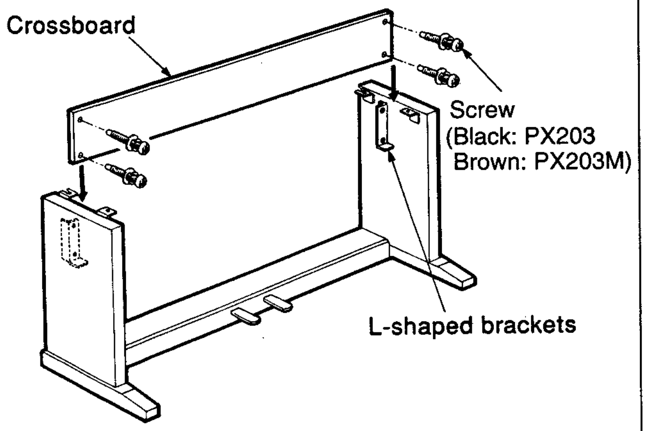
To prevent the piano unit from falling off the stand, secure it firmly with the screws.

1. Assemble the side panels and the pedal box with the 4 brass-colored screws.


Side panel
Pedal box
Screw (Brass-colored)

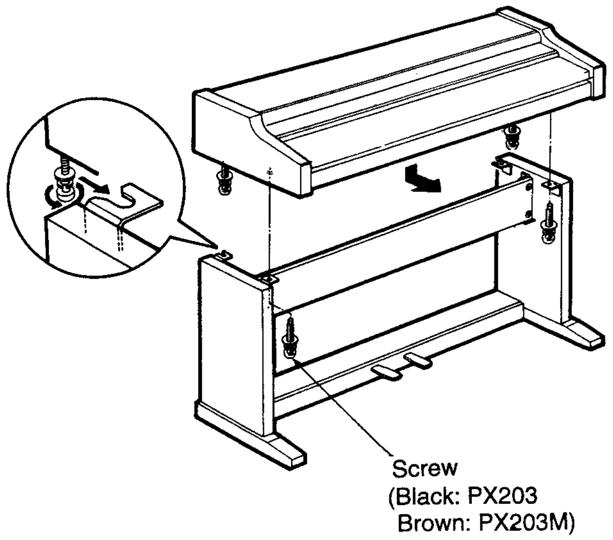
[Fig. 1]

2. Place the stand upright. Secure the crossboard to the front of the L-shaped brackets with 4 screws.


Crossboard
Screw
(Black: PX203
Brown: PX203M)
L-shaped brackets

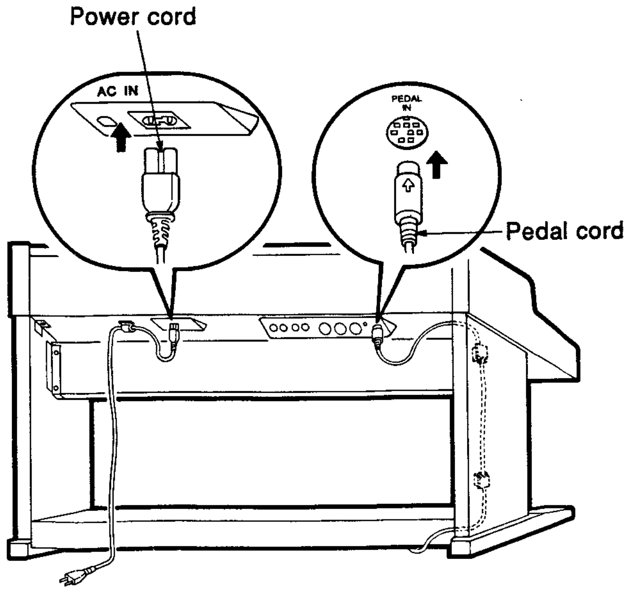
[Fig. 2]

3. Place the piano unit on the stand and secure it to the stand.


Screw
(Black: PX203
Brown: PX203M)

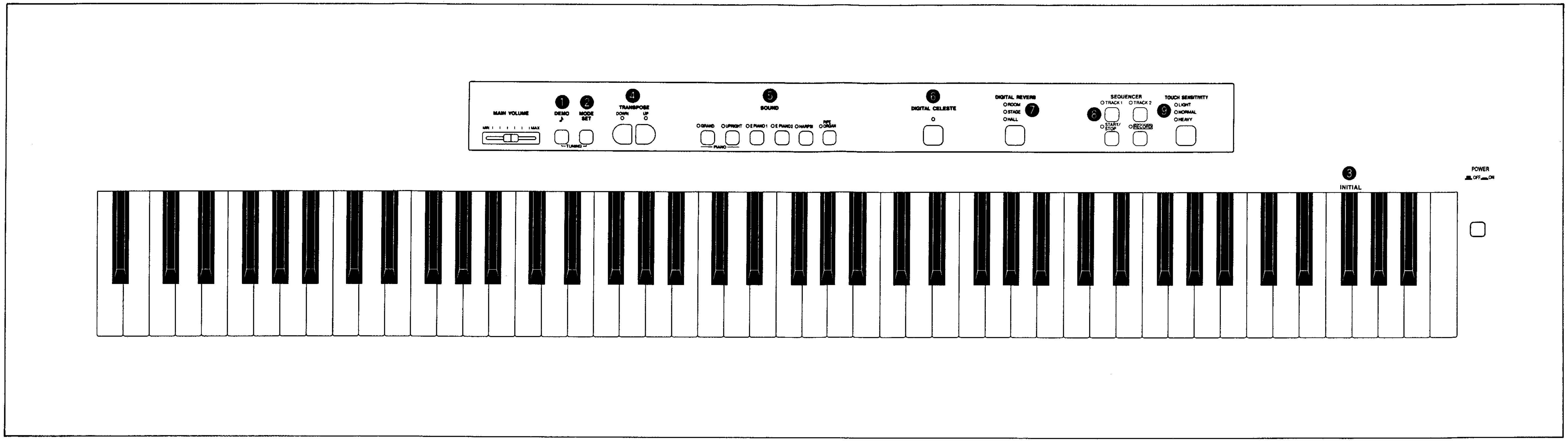
[Fig. 3]

4. Connect the pedal cord and power cord to their sockets located rear of the piano unit as shown below.


Power cord
AC IN
PEDAL IN
Pedal cord

[Fig. 4]

ARRANGEMENT OF CONTROL PANEL


MAIN VOLUME
MIN MAX
❶ DEMO ♪
❷ MODE SET
TUNING
❹ TRANSPOSE
DOWN
UP
❺ SOUND
GRAND
UPRIGHT
E.PIANO1
E.PIANO2
HARPSI
PIPE ORGAN
PIANO
❻ DIGITAL CELESTE
DIGITAL REVERB
ROOM
STAGE
HALL
❼
SEQUENCER
TRACK 1
TRACK 2
❽
START/STOP
RECORD
❾
TOUCH SENSITIVITY
LIGHT
NORMAL
HEAVY
❸ INITIAL
POWER
OFF ON

BASIC FUNCTIONS

❶ DEMO
Automatic demonstration performances stored in the piano's memory introduce the various sounds available. Listen to all the demonstration tunes in order, or listen to the demo tune of a specific sound.

❷ MODE SET, ❸ INITIAL KEY
Used when selecting functions to set or adjust, including type of piano tuning, minimum range (volume), sostenuto, initialization, plus all settable MIDI functions.

- If the INITIAL KEY is pressed while the **MODE SET** button is depressed, the settings of the buttons, etc. will return to the initialized settings made by the manufacturer.

❹ TRANSPOSE
C is the standard setting, but you can raise or lower the key of the entire instrument within a one-octave range with these two buttons. The buttons are also used for adjusting the volume balance of mixed sounds.

❺ SOUND
Select from 6 different sounds for the piano. You can mix sounds by selecting two simultaneously. All sounds feature Touch Response.

❻ DIGITAL CELESTE
Apply a celeste effect to give the sound greater depth. The setting is memorized independently for each sound.

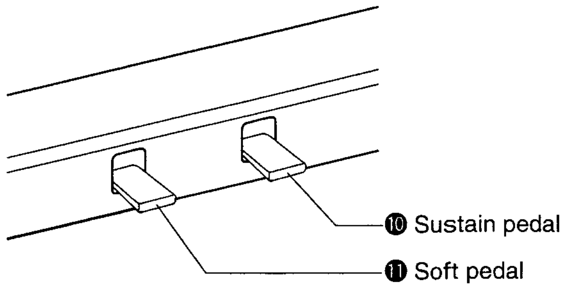
❼ DIGITAL REVERB
Add a reverb effect to the sound. Choose one of three different echo types. The setting is memorized independently for each sound.

❽ SEQUENCER
Record your performance and have it automatically played back.

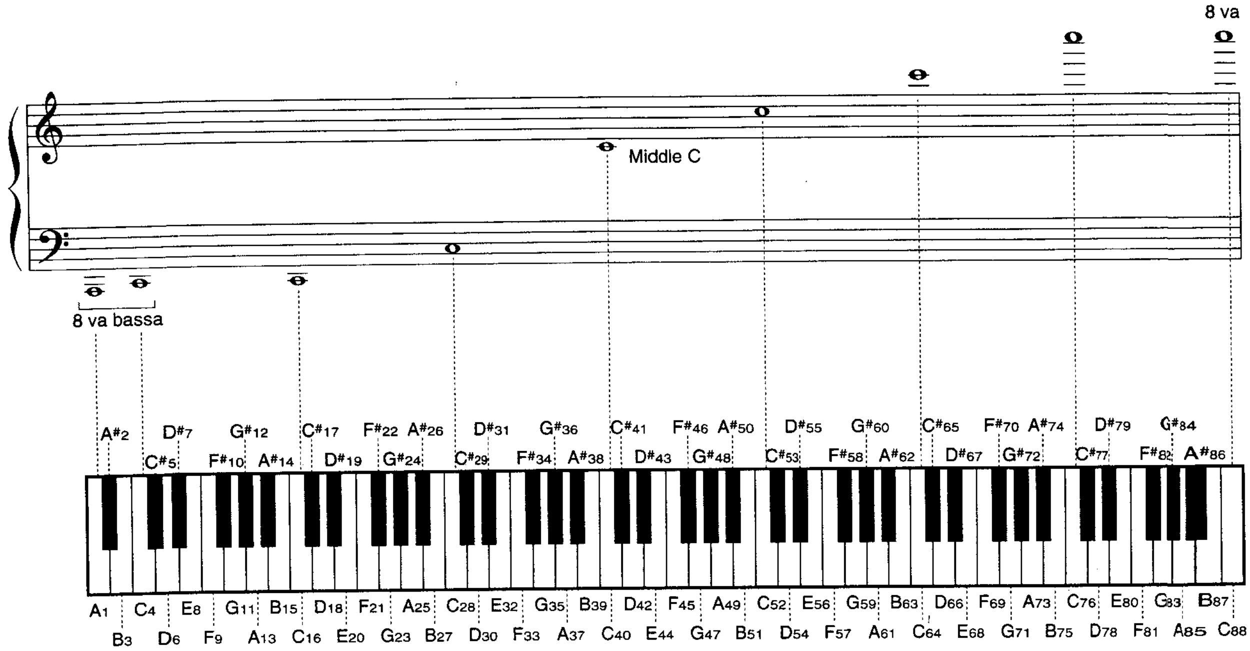
❾ TOUCH SENSITIVITY
Choose **LIGHT**, **NORMAL** or **HEAVY** keyboard touch (Touch Response) to match your type of playing

❿ Sustain Pedal
The sound is sustained when a key is released while this pedal is depressed. For **GRAND PIANO** and **UPRIGHT PIANO** sounds, the tones of the 17 rightmost keys are automatically sustained.

⓫ Soft pedal
Press the pedal for softer, muted sound. It can also be used as a sostenuto pedal. When used as a sostenuto pedal, and **PIPE ORGAN** is selected, the tones continue to sound for as long as the pedal is depressed.


❿ Sustain pedal
⓫ Soft pedal

KEYBOARD RANGES


8 va
Middle C
8 va bassa
A#2 D#7 G#12 C#17 F#22 A#26 D#31 G#36 C#41 F#46 A#50 D#55 G#60 C#65 F#70 A#74 D#79 G#84
C#5 F#10 A#14 D#19 G#24 C#29 F#34 A#38 D#43 G#48 C#53 F#58 A#62 D#67 G#72 C#77 F#82 A#86
A1 C4 E8 G11 B15 D18 F21 A25 C28 E32 G35 B39 D42 F45 A49 C52 E56 G59 B63 D66 F69 A73 C76 E80 G83 B87
B3 D6 F9 A13 C16 E20 G23 B27 D30 F33 A37 C40 E44 G47 B51 D54 F57 A61 C64 E68 G71 B75 D78 F81 A85 C88

INITIAL SETTING

The initial setting function is used to return to the original factory settings, and to reset the customer settings and misoperations. The selected sound and various functions, MIDI settings are initialized with this operation.

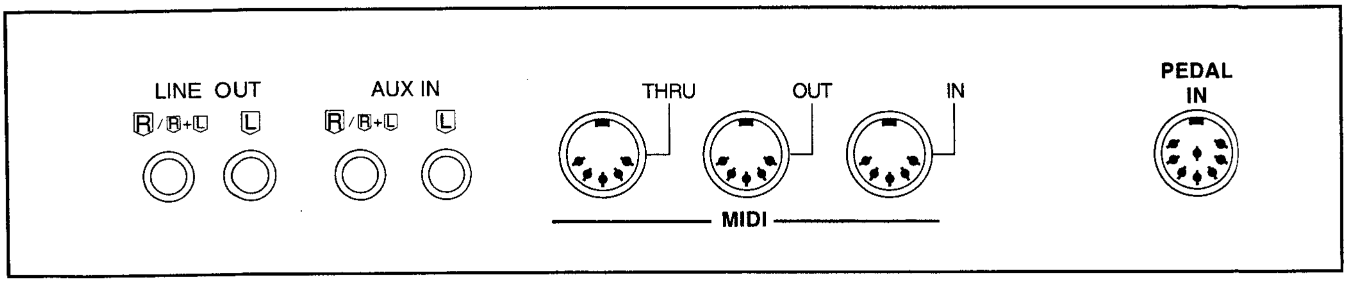
■ INITIAL SETTING

Press the **INITIAL** key while the **MODE SET** button is pressed. Or turn on the **POWER** switch while pressing the **INITIAL** key.

1. While pressing the **MODE SET** button.
2. Press the **INITIAL** key.

TERMINALS

(on the rear panel)



LINE OUT (output level 1.5 Vrms, 600 Ω)
By plugging into an external high-power amplifier, the sound can be reproduced at a high volume. Or connect a tape recorder and use them as recording terminals. To output monaural sound, connect the external equipment to the **R/R+L** terminal. (Do not connect the **L** terminal.)

AUX IN (input level 0.5 Vrms, 6 kΩ)
Other instruments such as a rhythm machine or sound module can be connected to the piano so that the sound is output from the piano. To receive monaural sound, connect the other instruments to the **R/R+L** terminal. (Do not connect the **L** terminal.)

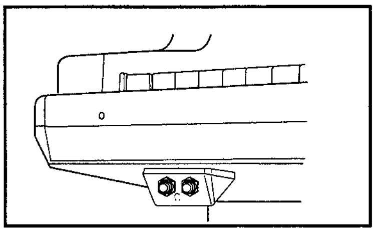
MIDI (Musical Instrument Digital Interface)
MIDI is the standard specification that enables connection to equipment such as synthesizers and personal computers.

IN :	The terminal that receives data from external equipment.
OUT :	The terminal that transmits data from this instrument to external equipment.
THRU:	The terminal that transfers data from the **IN** terminal directly to other equipment.

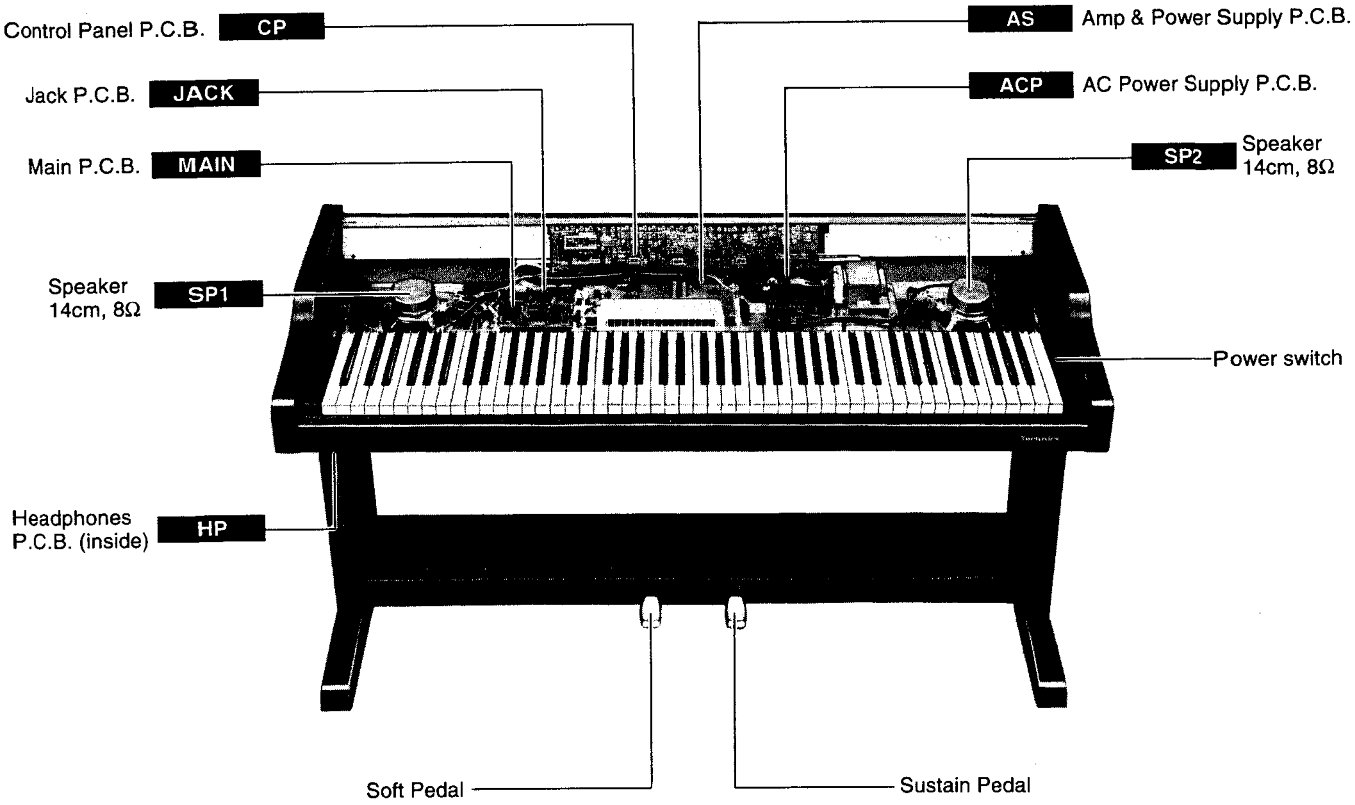
- Use a 5-pin DIN cord (less than 15 m long) for these connections.

PEDAL IN
Connect the cord from the included stand to this terminal.

PHONES (🎧) ×2
For silent practice, headphones may be used. When plugged in, the speaker system is automatically switched off, and sound is heard only through the headphones.



PARTS LOCATION


Control Panel P.C.B.
CP
Jack P.C.B.
JACK
Main P.C.B.
MAIN
Speaker
14cm, 8Ω
SP1
Headphones
P.C.B. (inside)
HP
AS
Amp & Power Supply P.C.B.
ACP
AC Power Supply P.C.B.
SP2
Speaker
14cm, 8Ω
Power switch
Soft Pedal
Sustain Pedal

[Photo-1]

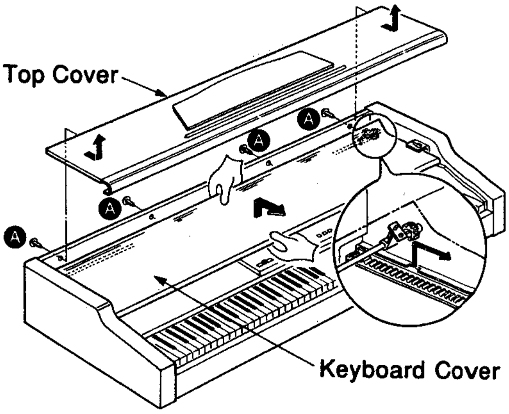
DISASSEMBLY INSTRUCTIONS

1 Removing the top cover

1. Remove the music stand.
2. Remove the top cover holding screws (Ⓐ 4 pcs.).
3. Slide the top cover forward and lift up.

2 Removing the keyboard cover

1. Remove the top cover (see Step 1).
2. Close the keyboard cover completely so that the gears at the rear of the keyboard cover become free from the guide rails.
3. Lift the keyboard cover up.



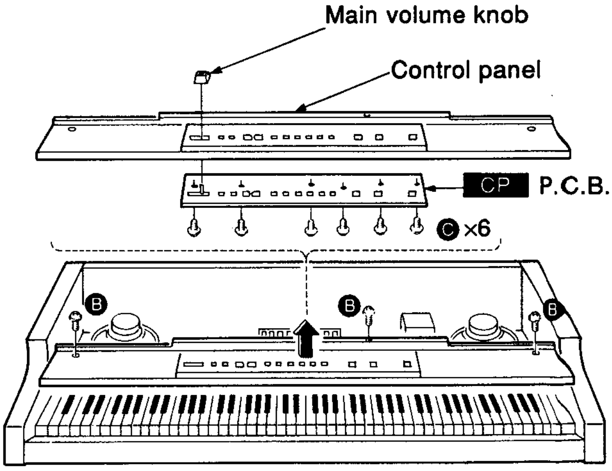
[Fig.5]

3 Removing the control panel

1. Remove the top cover and keyboard cover (see Step 1, 2).
2. Remove the control panel holding screws (Ⓑ 3 pcs.).
3. Remove the control panel as shown in Fig. 6.

4 Removing the CP P.C.B.

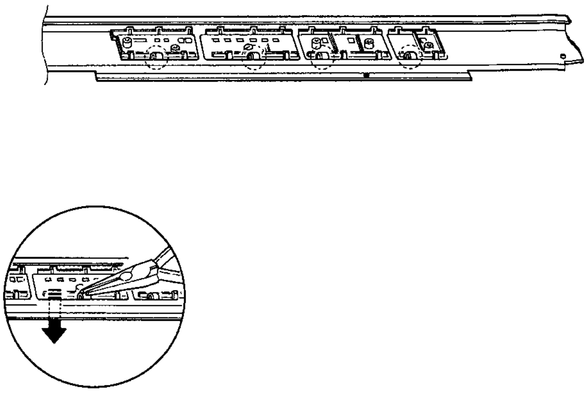
1. Remove the control panel (see Step 3).
2. Remove the main volume knob.
3. Remove the CP P.C.B. mounting screws (Ⓒ 6 pcs.).



[Fig.6]

5 Removing the control panel ornament

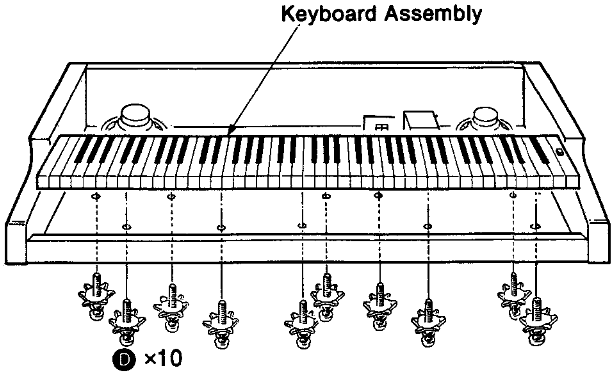
1. Remove the control panel (see Step 3).
2. Remove the CP P.C.B. (see Step 4).
3. Release the control panel ornament holding claws.



[Fig.7]

6 Removing the keyboard assembly

1. Remove the control panel (see Step 3).
2. Remove the keyboard assembly holding screws located on the bottom of the cabinet (Ⓓ 10 pcs.).



[Fig.8]

7 Keys (s)

Disassembly

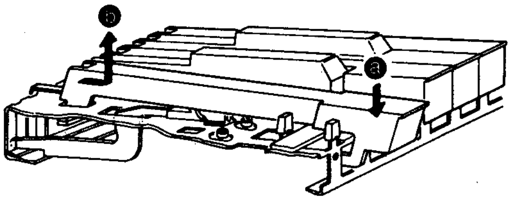
1. Remove the keyboard assembly (see Step 6).
2. To release the key claw.
   - ⓐ Press the front of the key downward slightly.
   - ⓑ Press the rear of the key forward gently.
3. To remove the key, lift as shown in Fig. 9.

NOTE:

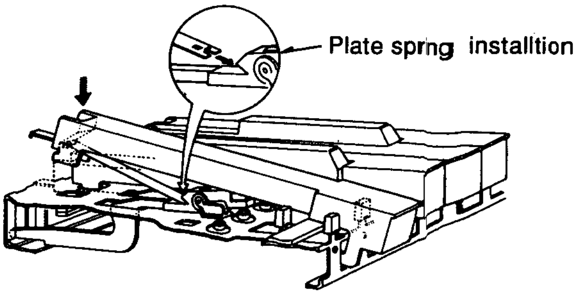
- The key claw is easily broken. Do not apply undue force. Should a key claw break, it can still be used; however, a replacement is recommended.
- If a black key is to be replaced it is necessary to remove both adjacent white keys.

Assembly

1. Insert the front part of the key into the chassis.
2. Insert the plate spring into the hammer notch as shown in Fig. 10.
3. While slowly lowering the key into the chassis, insert the plate spring into the notch at the rear of the key.
4. Carefully insert the key into the opening in the chassis and slide the key towards the rear to lock it in place.



[Fig.9]



[Fig.10]

8 Removing the printed circuit boards

- Remove the top cover and keyboard cover (see Step 1, 2).

MAIN P.C.B.

1. Remove the MAIN P.C.B. mounting screws (Ⓔ 2 pcs.).
2. Release the claws of the P.C.B. holders.

AS P.C.B.

1. Remove the AS P.C.B. mounting screws (Ⓕ 2 pcs.).
2. Release the claws of the P.C.B. holder.

JACK P.C.B.

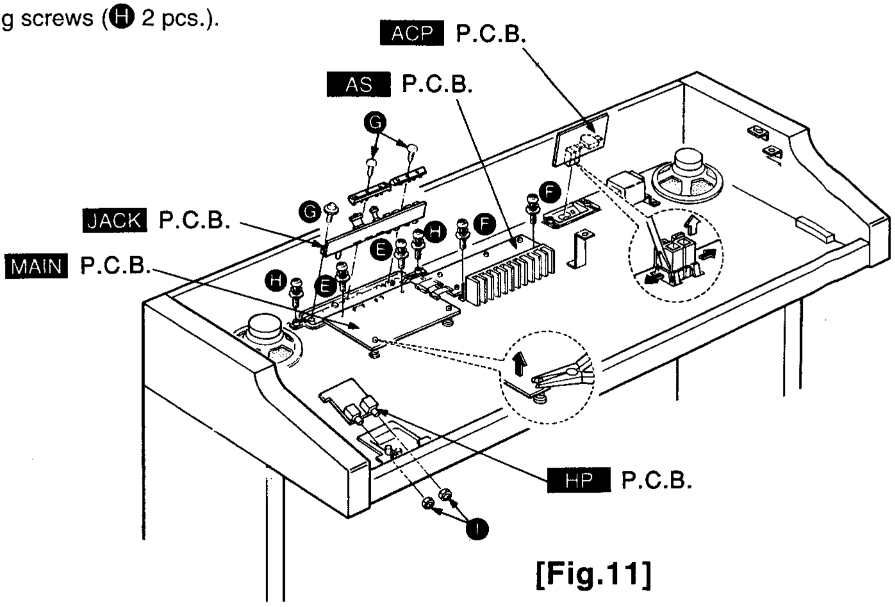
1. Remove the JACK P.C.B. mounting screws (Ⓖ 3 pcs.).
2. Remove the jack panel mounting screws (Ⓗ 2 pcs.).

HP P.C.B.

1. Remove the keyboard assembly (see Step 6).
2. Remove the headphone jack mounting nuts (Ⓘ 2 pcs.).

ACP P.C.B.

- Release the claws of the AC IN connector bracket.



[Fig.11]

SYMPTOMS WHICH APPEAR TO BE SIGNS OF TROUBLE

Phenomenon	Remedy
No sound is produced when the keyboard is played.	•No sound is produced if the **MAIN VOLUME** is set to **MIN**. Use the sliding control to set the volume to an appropriate level. •If the MIDI LOCAL CONTROL is set to off, set it to on.

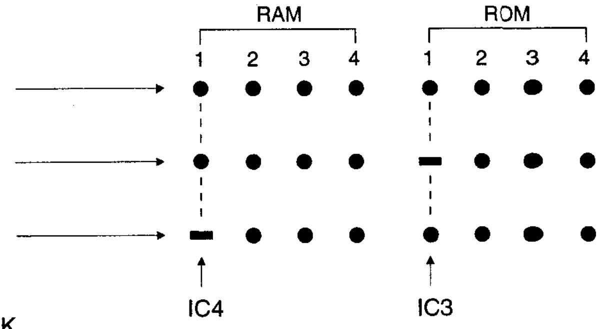
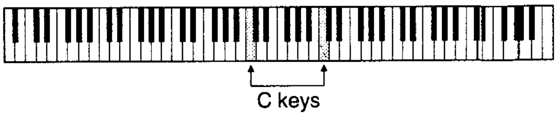
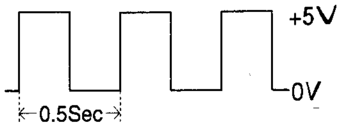
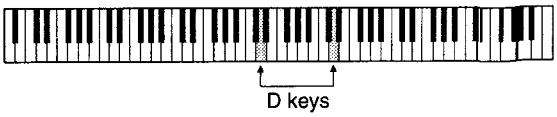
■About the back-up memory

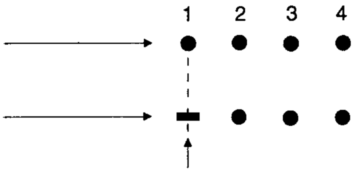
The selected sound and various functions, and MIDI settings and **SEQUENCER** controls remain in the memory for about one week after the **POWER** is turned off. If you wish to return all memories and settings to their factory preset status, while pressing the **MODE SET** button, press the **INITIAL** key on the keyboard. Or, press the **POWER** on and hold the **INITIAL** key at the same time.

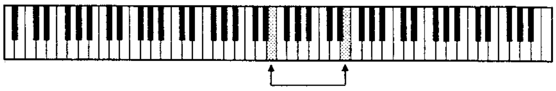
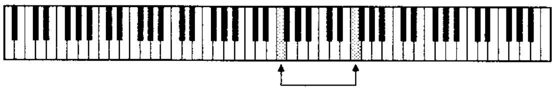
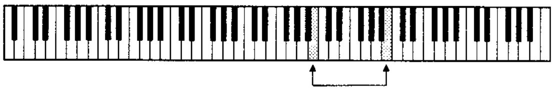
ABOUT THE SELF-DIAGNOSTIC FUNCTION

This model has some self-diagnostic capabilities. When set to the self-diagnostic mode, operation of various components can be verified by following the procedures in the chart below.

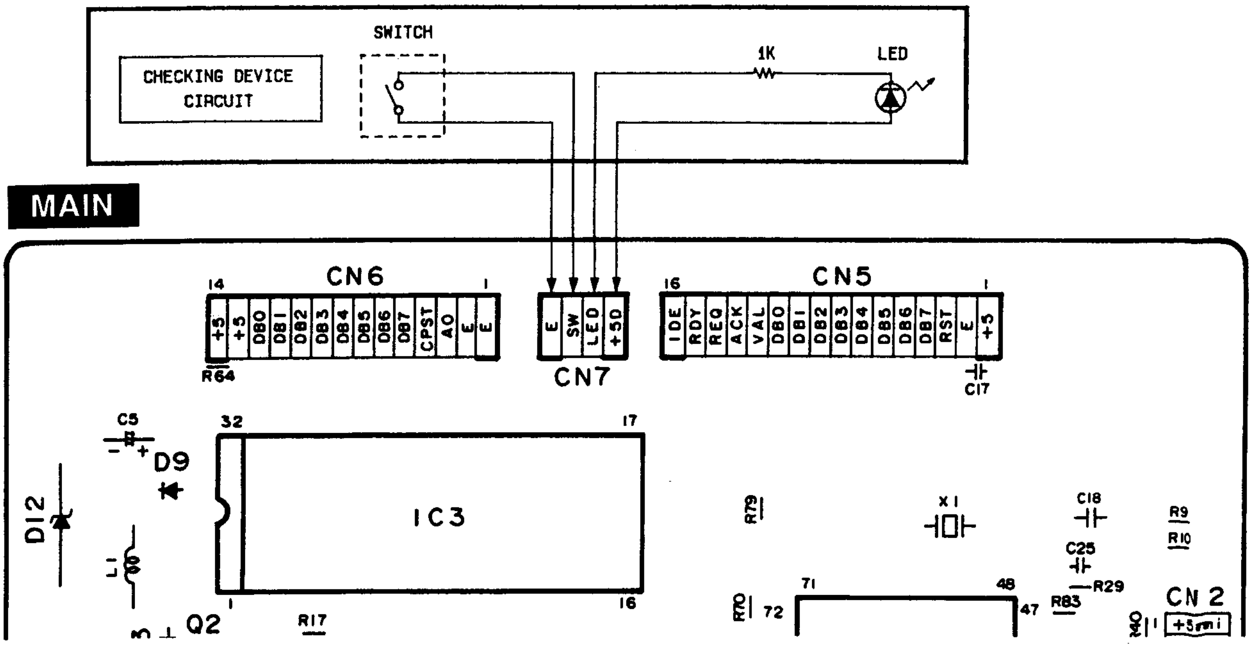
<table>
<tr><th>No.</th><th>PCB</th><th>TEST MODE</th><th>Procedure</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">MAIN</td><td>RAM (IC4), ROM (IC3) check</td><td>1. Connect the CHECKING DEVICE (refer to page I-13) to CN 7 on the MAIN P.C.B., and turn on the CHECKING DEVICE switch.
2. Turn on the power switch.</td></tr>
<tr><td colspan="2">When the power switch is turned on, the LED of the CHECKING DEVICE flashes 8 times. The first 4 flashes are for the RAM check, and the latter 4 flashes are for the ROM check. The order of the LED flashes corresponds to the respective IC numbers as shown below. If an IC is defective, the corresponding flash time is longer.

Examples
1. RAM OK, ROM OK
2. RAM OK, ROM (IC3) defective
3. RAM (IC4) defective, ROM OK

NOTE : ● indicates short flash time = OK
▬ indicates long flash time = Defective</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">MAIN</td><td>V53 Gate Array (IC2) check</td><td>Press and hold the two C keys shown below, and then turn on the power switch.
 </td></tr>
<tr><td colspan="2">Monitor pins 46-48 (DL6-DL4) of IC2 on an oscilloscope, and check whether incremental data (see figure) is output.
 </td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">CP</td><td>Gate array (IC1) check</td><td>1. Connect the CHECKING DEVICE to CN 7 on the MAIN P.C.B.
(The Checking Device switch should be off).
2. Press and hold the two D keys shown below, and then turn on the power switch.
 </td></tr>
<tr><td colspan="2">When the power switch is turned on, the LED of the CHECKING DEVICE flashes 4 times. The order of the LED flashes corresponds to the CPU (IC) on the respective P.C.B..s as shown below. If an IC is defective, the corresponding flash time is longer.

1. IC1 OK
2. IC1 defective

NOTE : ● indicates short flash time = OK
▬ indicates long flash time = Defective</td></tr>
</table>

No.	PCB	TEST MODE	Procedure
4	MAIN	Wave ROM (IC7) check	1. Press and hold the two E keys shown below, and then turn on the power switch. 2. Select the GRAND PIANO sound. 
		When set to the self-diagnostic mode, the Wave ROM outputs a sine wave. If no sound is produced, or if the sound is distorted, the Wave ROM is defective.	
5	CP	Control Panel LED check	Press and hold the two F keys shown below, and then turn on the power switch. 
		Press the buttons on the control panel and confirm that the corresponding LEDs light.	
6	MKB	Keyboard ROM (IC2) check	Press and hold the two B keys shown below, and then turn on the power switch. 
		If the keyboard ROM (IC2) is OK, one confirming beep will sound. If it is defective, several consecutive error beeps will sound.	

■ Connection between serving CHECKING DEVICE and MAIN P.C.B.


SWITCH
CHECKING DEVICE CIRCUIT
1K
LED
MAIN
CN6
14
1
+5
+5
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
CPST
A0
E
E
R64
CN7
E
SW
LED
+5D
CN5
16
1
IDE
RDY
REQ
ACK
VAL
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
RST
E
+5
C17
C5
32
17
D9
D12
L1
IC3
1
16
Q2
R17
R79
R78
72
71
48
47
X1
C18
C25
R29
R83
R9
R10
CN 2
+5mi

MIDI IMPLEMENTATION CHART

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1–16 1–16	1–16 1–16	memorized
Mode	Default Messages Altered	3 × —	1, 3 × —	memorized
Note Number	True voice	*21–108 —	0–127 *0–127	
Velocity	Note ON Note OFF	○ × (9nH: V=0)	○ ×	
After Touch	Key's Ch's	× ×	× ×	
Pitch Bender		×	×	
Control Change	7	×	**○	volume
	64	○	○	sustain pedal
	66	○	○	sostenuto pedal
	67	○	○	soft pedal
	93	○	○	chorus (digital celeste)
Prog Change	True #	○× 0–127	○× 0–5	
System Exclusive		×	×	
System Common	Song Pos Song Sel Tune	× × ×	× × ×	
System Real Time	Clock Commands	× ×	× ×	
Aux Messages	Local ON/OFF All Notes OFF Active Sense Reset	× × ○ ×	× ○ ○ ×	
Notes		○× ....Whether or not the data for each of these items is transmitted or received can be set. * Changes depending on the **TRANSPOSE** setting. ** Effective only in the MULTI TIMBRE mode.		

Mode 1: OMNI ON, POLY **Mode 2:** OMNI ON, MONO ○ : Yes
Mode 3: OMNI OFF, POLY **Mode 4:** OMNI OFF, MONO × : No

PRECAUTIONS BEFORE SERVICING

■ Precautions for measuring of the output waveforms.

1. The waveform was measured with a "National Digital Storage Oscilloscope VP-5730A". Therefore the waveforms of musical tone signals shown may differ somewhat due to the difference in the timing of triggering.
2. Since the 1/10 test probe is used, the indicated voltage value on the bottom part of each waveform photo is 1/10 of the actual value (e.g. 0.2 V/cm should be 2.0 V/cm).
3. To measure the waveforms, first set this unit to the self-diagnostic mode (refer to page I-13, No. 4). The Wave ROM output will then be output as a sine wave to facilitate the servicing check.

■ Important safety notice:

Components identified by a ⚠ mark have special characteristics impotant for safety.
When replacing any of these components, use only manufacture's specified parts.

■ Symbolic Marks

The symbolic marks for resistors and capacitors which used in this circuits are classified as following TABLE-1 and TABLE-2.

1. RESISTORS
   - Resistors without symbolic mark are FIXED CARBON FILM RESISTORS (ERD-type).
   - All resistors are 1/4 WATT, ±5 % TOLERANCE unless otherwise designated in schematic diagrams.

(TABLE-1)

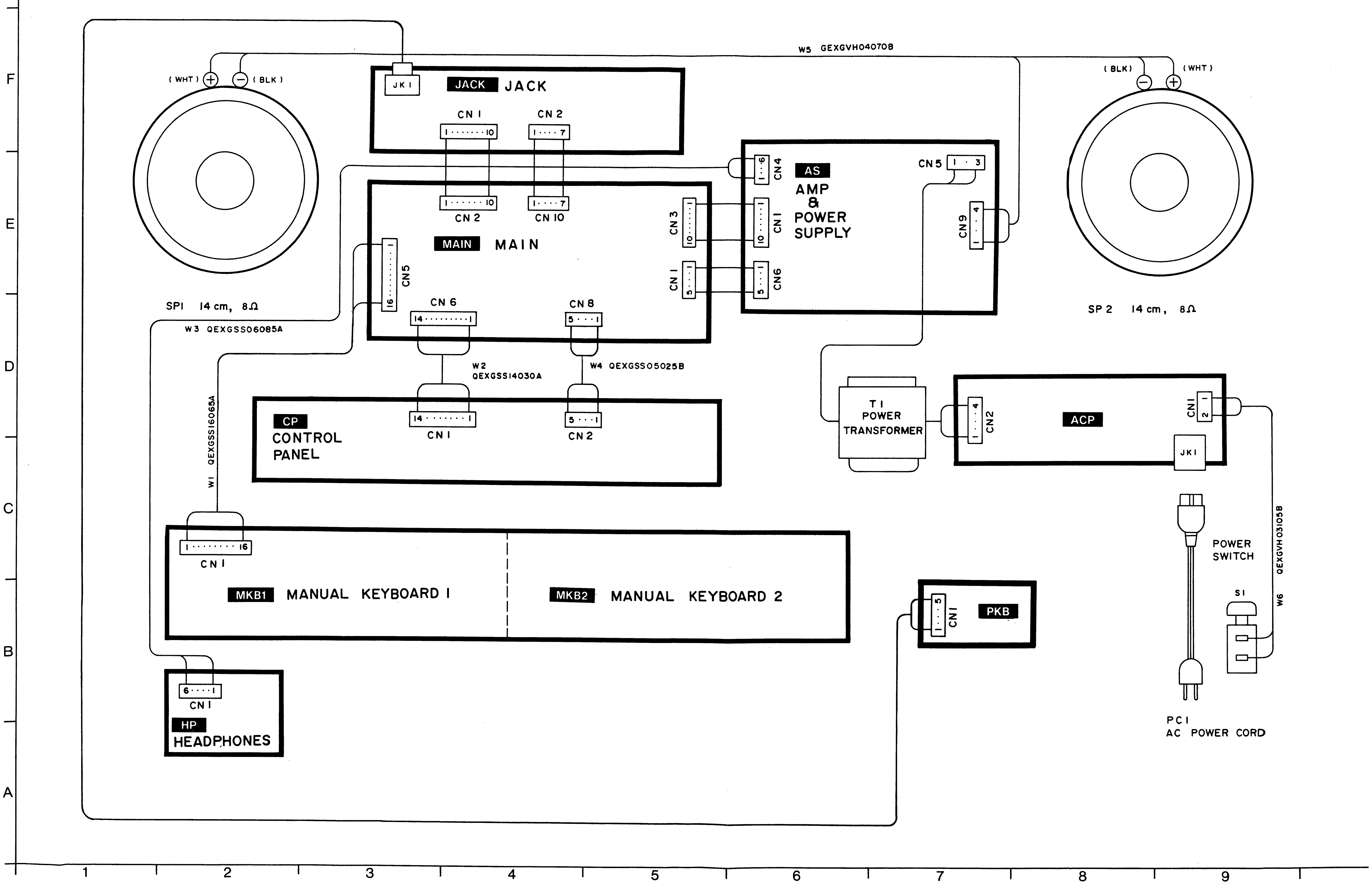
SYMBOL	SPECIFICATION	SYMBOL	SPECIFICATION
Ⓕ	Fixed Carbon Film Resistors "FLAME-PROOF" (ERD—F—type)	Ⓕ	Fixed Metal Film Resistors "FLAME-PROOF" (ERX—type)
Ⓕ	Fixed Wire Wound Resistors "FLAME-PROOF" (ERF—type)	🄵	Fuse Type Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERQ—type)
Ⓕ	Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERG—type)	🄵	Fuse Type Fixed Carbon File Resistors "FLAME-PROOF" (ERD2FC—type)
Ⓖ	Fixed Metal Film Resistors (Precision and High Stability) (ERO—type)		

2. CAPACITORS
   - Capacitors without symbolic mark are POLYESTER CAPACITORS. (ECQM-type, ECQG-type, ±10 % Tolerance)
   - Polarized capacitors without symbolic mark are Aluminum Electrolytic Capapcitors. (ECEA-type, ±20 % Tolerance)

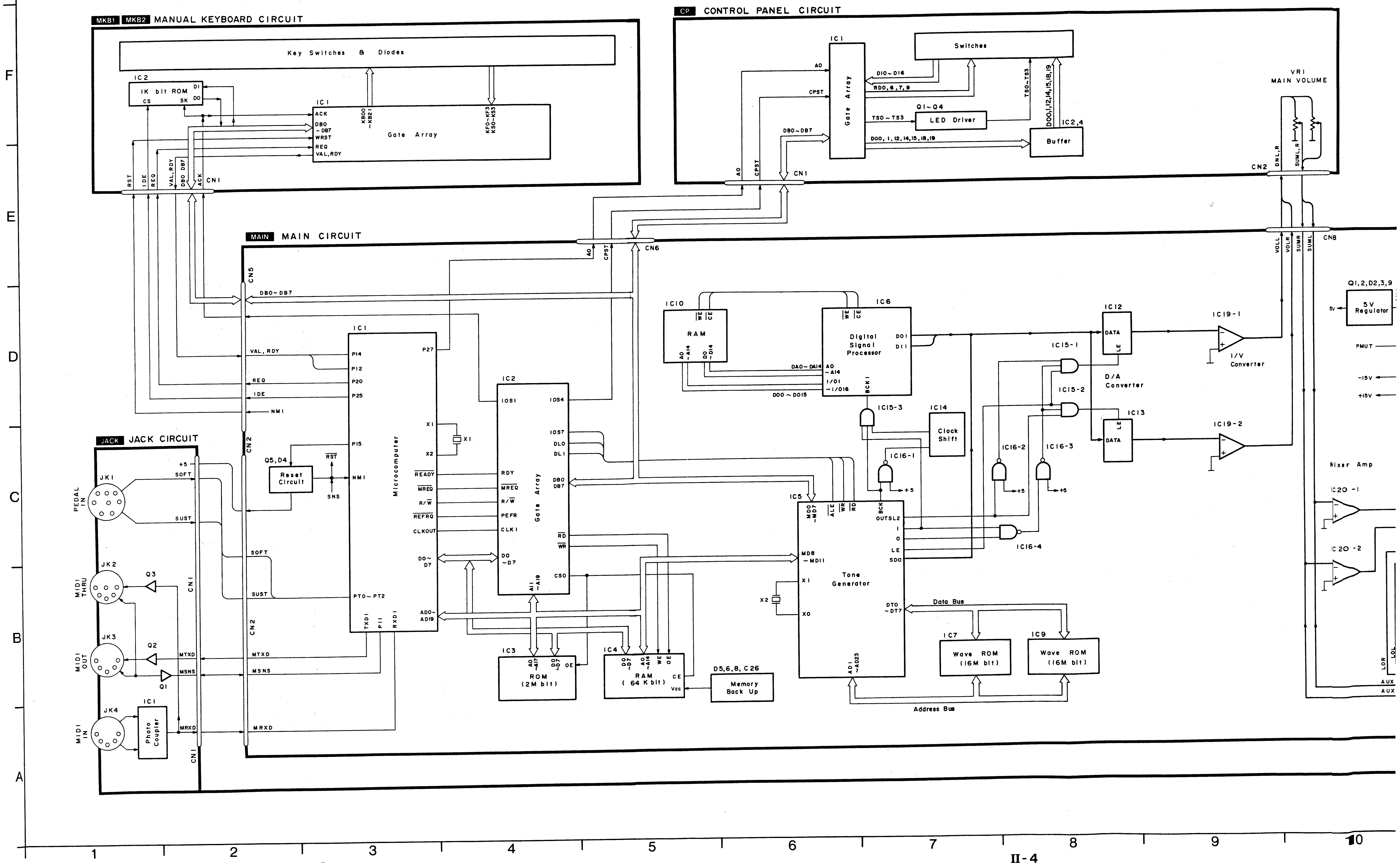
(TABLE-2)

SYMBOL	SPECIFICATION	TYPE
Ⓝ	Non-Polarized Electrolytic Capacitors	ECEA_KN_type
Ⓨ	Non-Polarized Electrolytic (for Network system)	ECEA_Y_type
Ⓣ	Tantalum Solid Electrolytic Capacitors	ECS_type
(TF)	Metalized Plastic Film Capacitors (TF Series)	ECQV_type
○	Temperature Compensating Ceramic Capacitors	ECC_type
	High-Dielectric Constant Ceramic Capacitors	ECK_type ECR_type
	Axial Lead Ceramic Capacitors	ECB_type
	Metalized Polyester Film Capacitors for Across the Line	ECQ_EW_type
	Aluminum Electrolytic Capacitors for Smoothing Circuit	ECES_type
	Multilayer Ceramic Chip Capacitors	ECUV_type

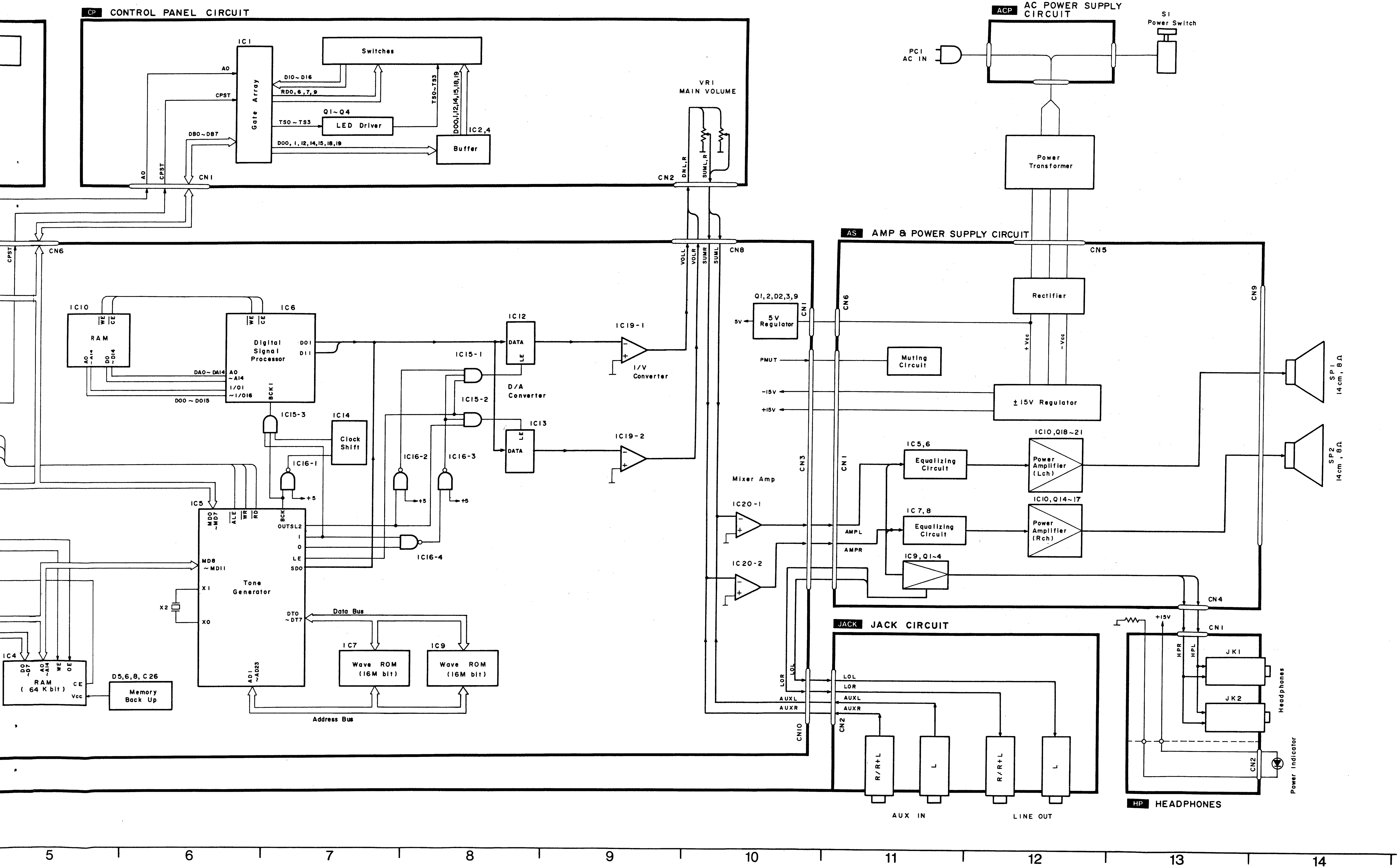
WIRING CONNECTION Diagram


W5 GEXGVH040708
(WHT) + − (BLK)
(BLK) − + (WHT)
JK1
JACK JACK
CN 1
CN 2
1 · · · · · · · 10
1 · · · · 7
CN 2
CN 10
MAIN MAIN
CN 5
16 · · · 1
CN 3
CN 1
CN 6
14 · · · · · · · · · 1
CN 8
5 · · · 1
AS
AMP & POWER SUPPLY
CN4
1 · · 6
CN 5
1 · 3
CN9
1 · · · 4
CN 1
CN6
SP1 14 cm, 8Ω
SP 2 14 cm, 8Ω
W3 QEXGSS06085A
W2 QEXGSS14030A
W4 QEXGSS05025B
W1 QEXGSS16065A
CP
CONTROL PANEL
CN 1
CN 2
T1 POWER TRANSFORMER
ACP
CN2
CN1
JK1
POWER SWITCH
S1
W6 QEXGVH03105B
PC1 AC POWER CORD
MKB1 MANUAL KEYBOARD 1
MKB2 MANUAL KEYBOARD 2
CN1
1 · · · · · · · · 16
PKB
CN1
1 · · · 5
HP HEADPHONES
CN 1
6 · · · · 1
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

BLOCK Diagram

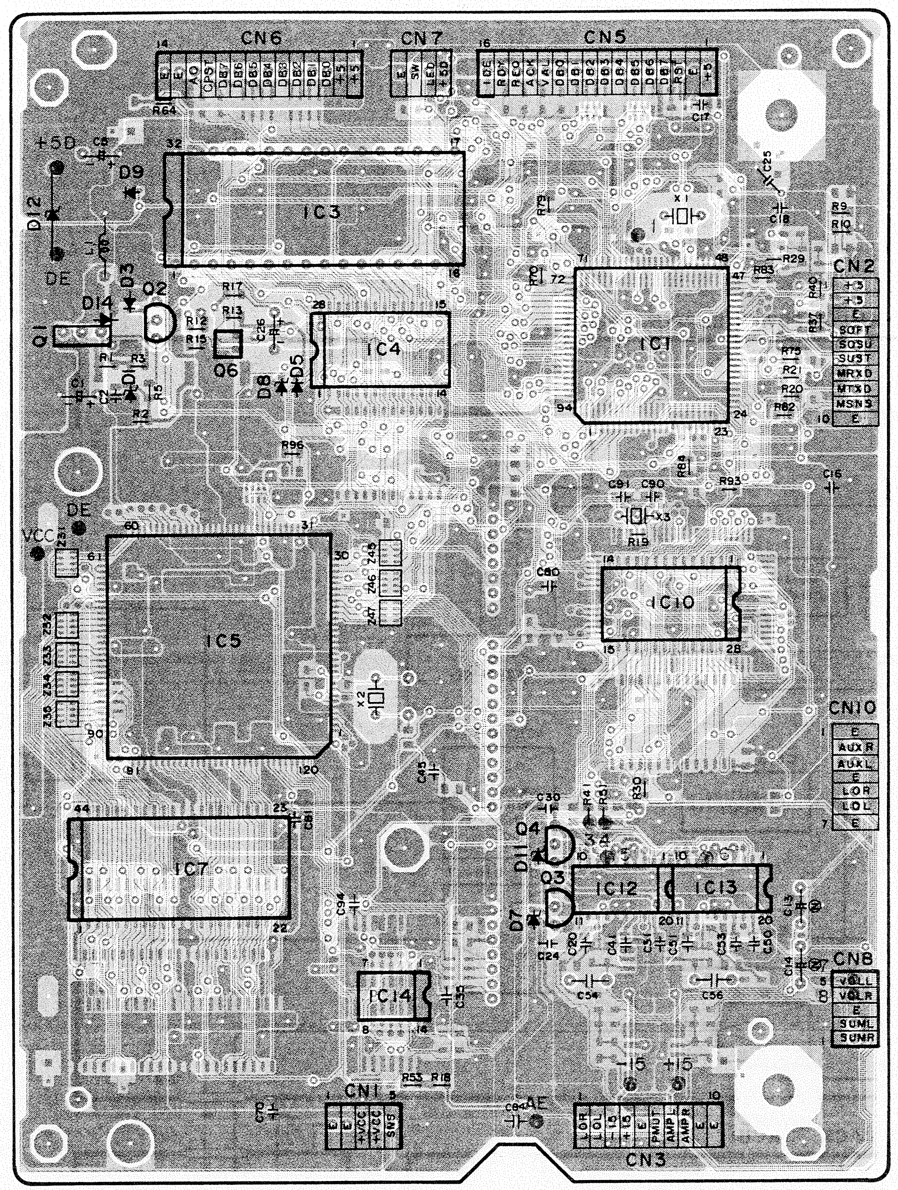


MKB1 MKB2 MANUAL KEYBOARD CIRCUIT
Key Switches & Diodes
IC2
1K bit ROM
DI
DO
CS
SK
IC1
ACK
DB0 ~DB7
WRST
REQ
VAL, RDY
Gate Array
KB00 ~KB21
KF0~KF3 KS0~KS3
RST
IDE
REQ
VAL, RDY
DB0 DB7
ACK
CN1
CP CONTROL PANEL CIRCUIT
IC1
Gate Array
A0
CPST
DB0~DB7
Switches
DI0~DI6
RD0, 6, 7, 9
Q1~Q4
TS0~TS3
LED Driver
TS0~TS3
D00, 1, 12, 14, 15, 18, 19
IC2, 4
Buffer
CN1
VR1
MAIN VOLUME
CN2
DML, R
SUML, R
MAIN MAIN CIRCUIT
CN6
CN5
CN8
VOLL
VOLR
SUMR
SUML
DB0~DB7
IC1
Microcomputer
VAL, RDY
REQ
IDE
NMI
P14
P12
P20
P25
P15
NMI
P27
X1
X2
READY
MREQ
R/W
REFRQ
CLKOUT
D0~D7
PT0~PT2
TXD1
P11
RXD1
AD0~AD19
Q5, D4
Reset Circuit
RST
SNS
IC2
Gate Array
IOS1
IOS4
IOS7
DLO
DL1
RDY
MREQ
R/W
PEFR
CLK1
DB0 DB7
D0 ~D7
RD
WR
CS0
A11 ~A19
IC3
A0 ~A17
D0 ~D7
OE
ROM (2M bit)
IC4
D0 ~D7
A0 ~A14
WE
OE
RAM (64 K bit)
CE
Vcc
D5, 6, 8, C26
Memory Back Up
IC10
RAM
WE
CE
A0 ~A14
D0 ~D14
IC6
Digital Signal Processor
WE
CE
DO1
DI1
DA0~DA14
A0 ~A14
I/01 ~I/016
D00 ~ D015
BCK1
IC15-3
IC14
Clock Shift
IC16-1
+5
IC5
Tone Generator
MD0 ~MD7
ALE
WR
RD
BCK
OUTSL2
I
O
LE
SDO
MD8 ~MD11
X1
X2
X0
DT0 ~DT7
AD1 ~AD23
Data Bus
IC7
Wave ROM (16M bit)
IC9
Wave ROM (16M bit)
Address Bus
IC12
DATA
LE
IC13
DATA
LE
D/A Converter
IC15-1
IC15-2
IC16-2
IC16-3
IC16-4
+5
IC19-1
IC19-2
I/V Converter
Q1, 2, D2, 3, 9
5V Regulator
5V
PMUT
-15V
+15V
Mixer Amp
IC20 -1
IC20 -2
LOR
LOL
AUX
AUX
JACK JACK CIRCUIT
JK1
PEDAL IN
+5
SOFT
SUST
JK2
MIDI THRU
Q3
JK3
MIDI OUT
Q2
MTXD
MSNS
Q1
JK4
MIDI IN
IC1
Photo Coupler
MRXD
CN1
CN2
SOFT
SUST
MTXD
MSNS
MRXD
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10

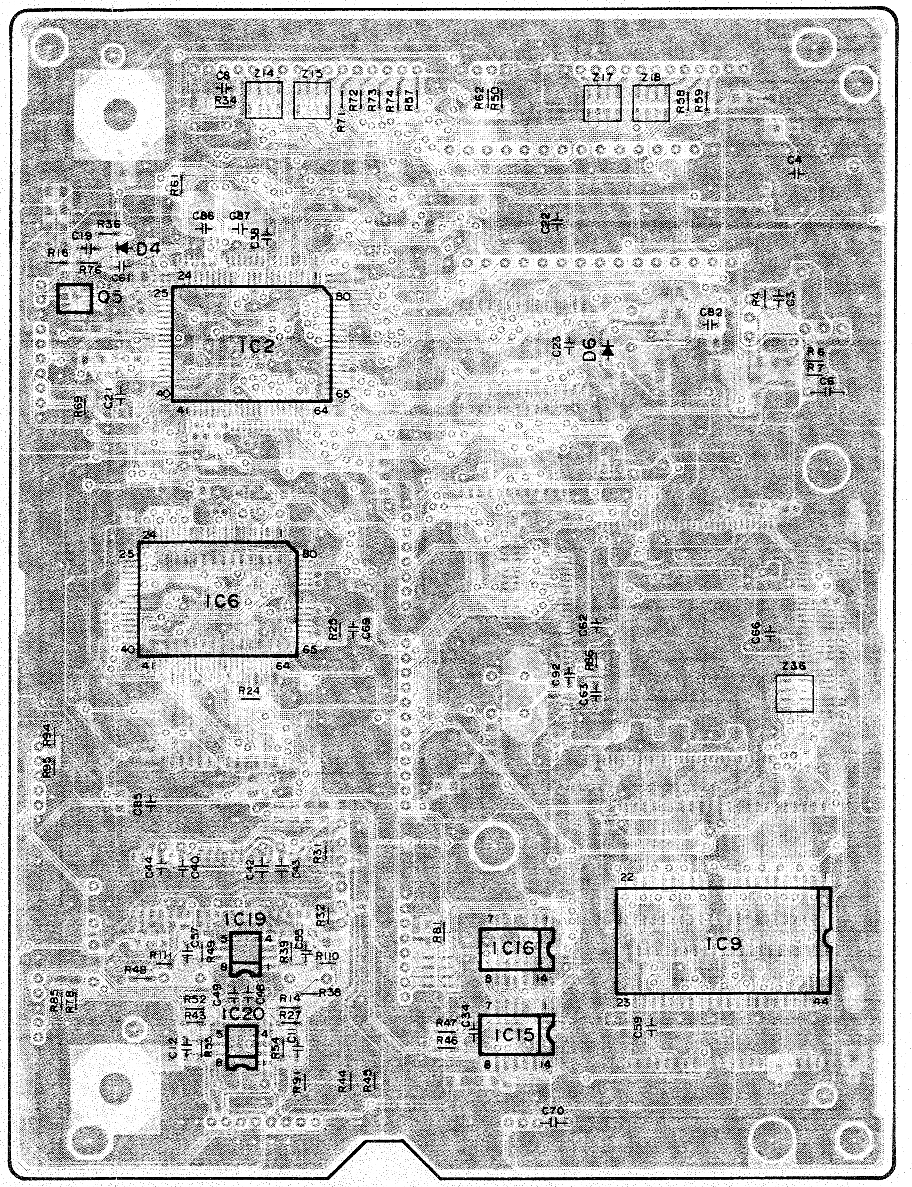

CP CONTROL PANEL CIRCUIT
IC1
Gate Array
A0
CPST
DB0~DB7
Switches
DI0~DI6
RD0, 6, 7, 9
Q1~Q4
TS0~TS3
LED Driver
TS0~TS3
D00, 1, 12, 14, 15, 18, 19
D00, 1, 12, 14, 15, 18, 19
IC2,4
Buffer
CN1
VR1
MAIN VOLUME
DNL, R
SUML, R
CN2
CN6
CPST
CN8
VOLL
VOLR
SUMR
SUML
IC10
WE
CE
RAM
A0~A14
D0~D14
IC6
Digital Signal Processor
DO1
DI1
DA0~DA14
A0~A14
I/O1~I/O16
DO0~DO15
BCK1
IC12
DATA
LE
IC13
D/A Converter
IC19-1
IC19-2
I/V Converter
IC15-1
IC15-2
IC15-3
IC14
Clock Shift
IC16-1
IC16-2
IC16-3
IC16-4
+5
IC5
MD0~MD7
ALE
WR
RD
BCK
OUTSL2
I
O
LE
SD0
MD8~MD11
X1
X2
X0
Tone Generator
DT0~DT7
Data Bus
AD1~AD23
Address Bus
IC7
Wave ROM (16M bit)
IC9
Wave ROM (16M bit)
IC4
D0~D7
A0~A14
WE
OE
RAM (64 K bit)
CE
Vcc
D5,6,8, C26
Memory Back Up
Q1,2,D2,3,9
5V Regulator
5V
PMUT
-15V
+15V
Mixer Amp
IC20-1
IC20-2
CN3
CN1
CN6
CN10
LOR
LOL
AUXL
AUXR
ACP AC POWER SUPPLY CIRCUIT
PC1
AC IN
S1
Power Switch
Power Transformer
AS AMP & POWER SUPPLY CIRCUIT
CN5
Rectifier
+Vcc
-Vcc
Muting Circuit
± 15V Regulator
IC5,6
Equalizing Circuit
IC10,Q18~21
Power Amplifier (Lch)
IC7,8
Equalizing Circuit
IC10,Q14~17
Power Amplifier (Rch)
IC9,Q1~4
AMPL
AMPR
CN9
CN4
SP1
14cm, 8Ω
SP2
14cm, 8Ω
JACK JACK CIRCUIT
CN2
LOL
LOR
AUXL
AUXR
R/R+L
L
R/R+L
L
AUX IN
LINE OUT
+15V
CN1
HPR
HPL
JK1
JK2
Headphones
CN2
Power Indicator
HP HEADPHONES
5
6
7
8
9
10
11
12
13
14

MAIN P.C. Board

MAIN (SXPG214691) (COMPONENT SIDE)


CN6
CN7
CN5
CN2
CN10
CN8
CN1
CN3
IC1
IC3
IC4
IC5
IC7
IC10
IC12
IC13
IC14
Q1
Q2
Q3
Q4
Q6
D1
D3
D5
D7
D8
D9
D11
D12
D14
X1
X2
X3
+5D
DE
VCC
AE

MAIN (FOIL SIDE)


IC2
IC6
IC9
IC15
IC16
IC19
IC20
Q5
D4
D6

Measuring Condition ■ 波形の測定条

Check Point ❸～❽

Set to the self-diagnostic mode followings.

- While pressing two E keys (①) simulta
  power switch.

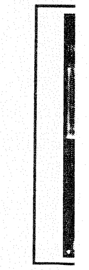
次のように自己診断モードに設定してください。

- 2 つの E キー (①) を同時に押しながら、
  る。

- SOUND .... GRANI
- Main Volume .... Center
- Keyboard...................................... A_1 (②)

❶

❹



❼,

MAIN

NOTES:

- IC'S

IC1:	SVIGD70320GJ
IC2:	D65012GF-A79
IC3:	QSIG03C02013
IC4:	M5256BFP85LL
IC5:	TC25540AF006
IC6:	D6382GF-3B9
IC7:	QSIGH3C16CN9
IC9:	QSIGH3C16CR0
IC10:	HM65256BLF10
IC12, 13:	PCM1702U
IC14:	D74HC164GS
IC15:	D74HC11GS
IC16:	D74HC00GS
IC19, 20:	M5218AFP

- TRANSISTORS

Q1:	2SB941
Q2, 3:	2SC1815GR
Q4:	2SA1015-GR
Q5:	2SB709AR
Q6:	2SD601AQ

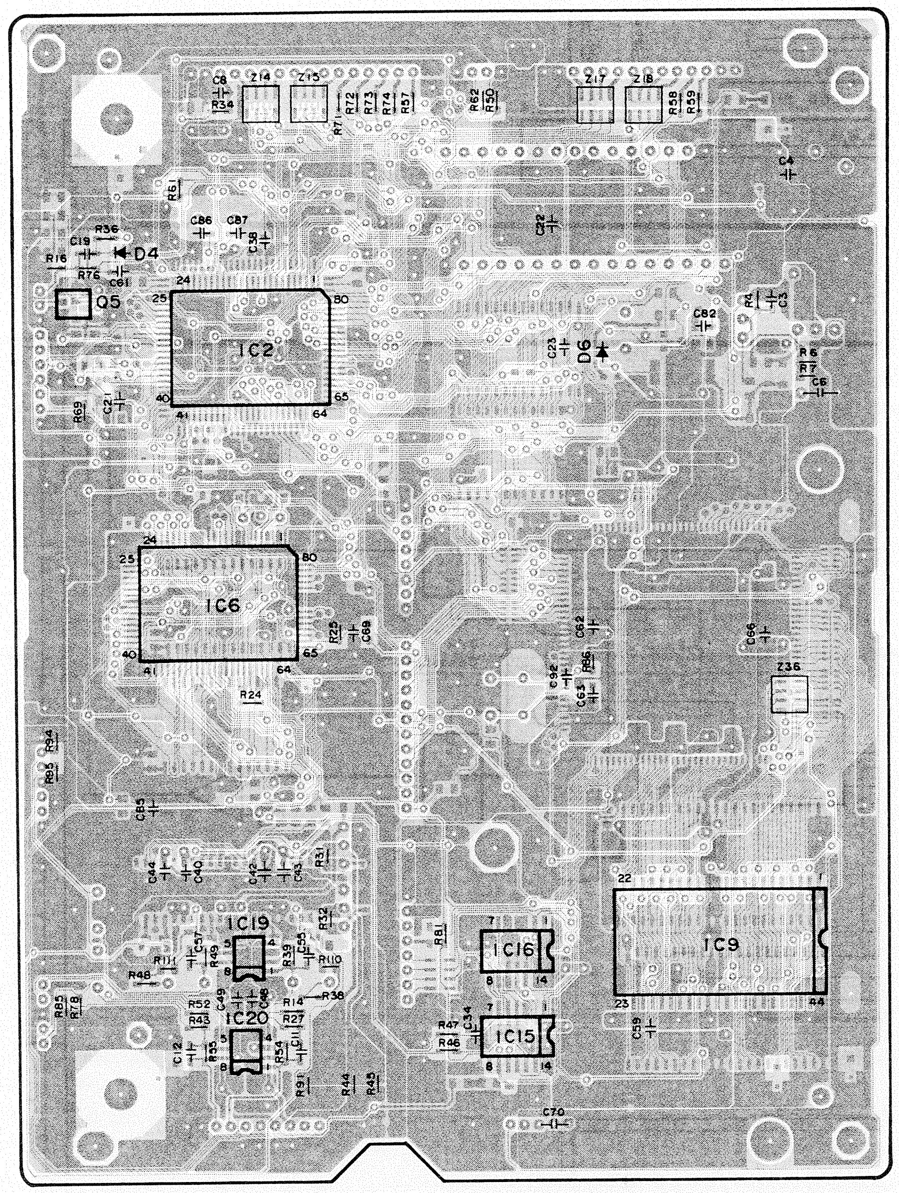
- DIODES

D1:	MA8047
D3～6, 9:	MA110
D7, 11:	MA8062
D8:	MA8056
D12:	MA2062LF
D14:	EK04

F
E
D
C
B
A

1 2 3 4 5 6 7 8 9 10

MAIN (FOIL SIDE)


Z14
Z15
Z17
Z18
C8
R34
R71
R72
R73
R74
R57
R62
R50
R58
R59
C4
R61
C86
C87
C38
R36
C19
D4
R16
R76
C81
Q5
IC2
24
25
80
40
41
64
65
C21
R69
C32
C23
D6
C82
R4
C3
R6
R7
C6
IC6
24
25
80
40
41
64
65
R25
C59
R24
C62
C52
C63
R96
C66
Z36
R94
R95
C85
C44
C40
C42
C43
R31
IC19
R32
R49
R11
R39
R55
C57
R10
R48
C49
C48
R14
R38
R52
R53
IC20
R27
C12
R35
R54
C11
R91
R44
R45
R81
IC16
R47
R46
C34
IC15
C39
IC9
22
23
44
C70
R83
R19

MAIN

NOTES:

• IC'S	
IC1:	SVIGD70320GJ
IC2:	D65012GF-A79
IC3:	QSIG03C02013
IC4:	M5256BFP85LL
IC5:	TC25540AF006
IC6:	D6382GF-3B9
IC7:	QSIGH3C16CN9
IC9:	QSIGH3C16CR0
IC10:	HM65256BLF10
IC12, 13:	PCM1702U
IC14:	D74HC164GS
IC15:	D74HC11GS
IC16:	D74HC00GS
IC19, 20:	M5218AFP
• TRANSISTORS	
Q1:	2SB941
Q2, 3:	2SC1815GR
Q4:	2SA1015-GR
Q5:	2SB709AR
Q6:	2SD601AQ
• DIODES	
D1:	MA8047
D3~6, 9:	MA110
D7, 11:	MA8062
D8:	MA8056
D12:	MA2062LF
D14:	EK04

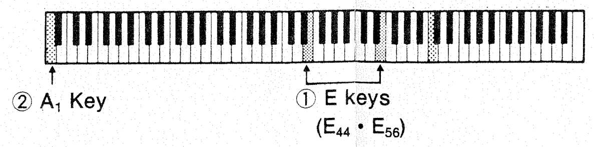
Measuring Condition ■ 波形の測定条件

Check Point ❸~❽
Set to the self-diagnostic mode followings.

- While pressing two E keys (①) simultaneously, turn on the power switch.

次のように自己診断モードに設定してください。

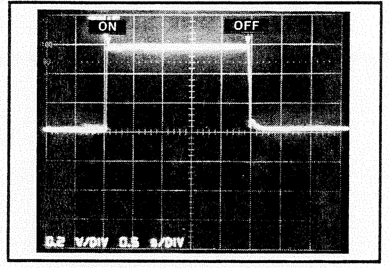
- 2つのEキー(①)を同時に押しながら、電源スイッチをオンする。
- SOUND .... GRAND PIANO
- Main Volume .... Center
- Keyboard...................................... A_1 (②)


② A_1 Key
① E keys
(E_{44} • E_{56})

Check Point ❶
Set the initial setting mode (Refer to Page Ⅰ-3)
イニシャルセッティングを行ってください。(Ⅰ-3 ページ参照)

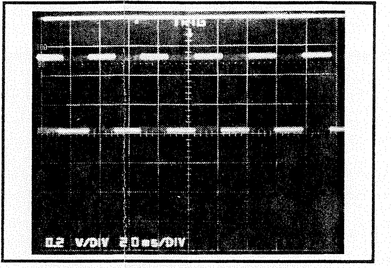
- SOUND .... GRAND PIANO
- Main Volume .... Center

❶ RESET

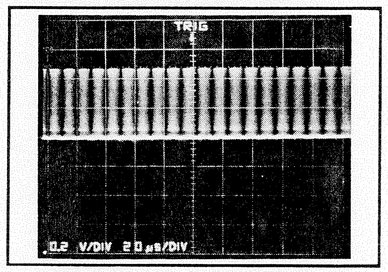


- Power SW .... ON → OFF

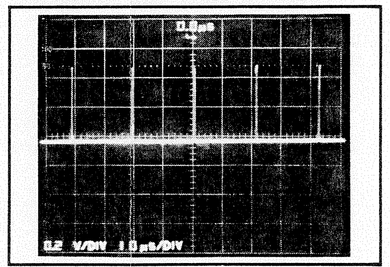
❸



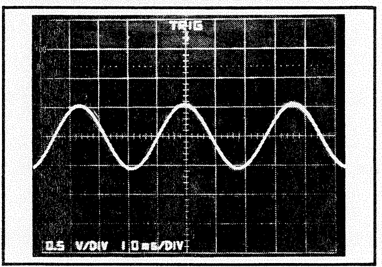
❹



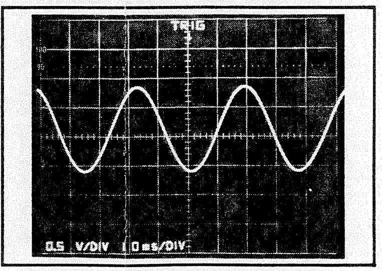
❺, ❻



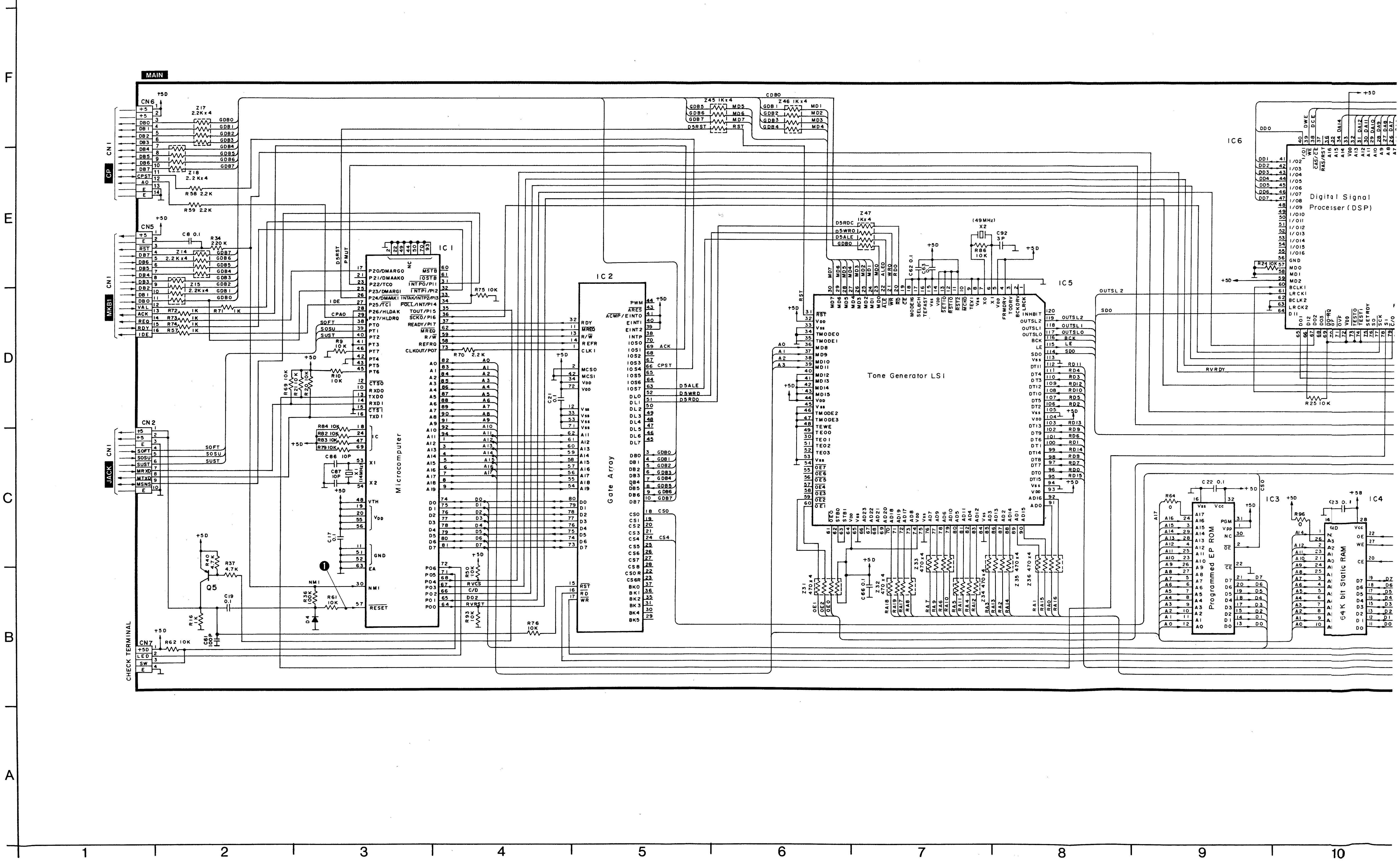
❼, ❽

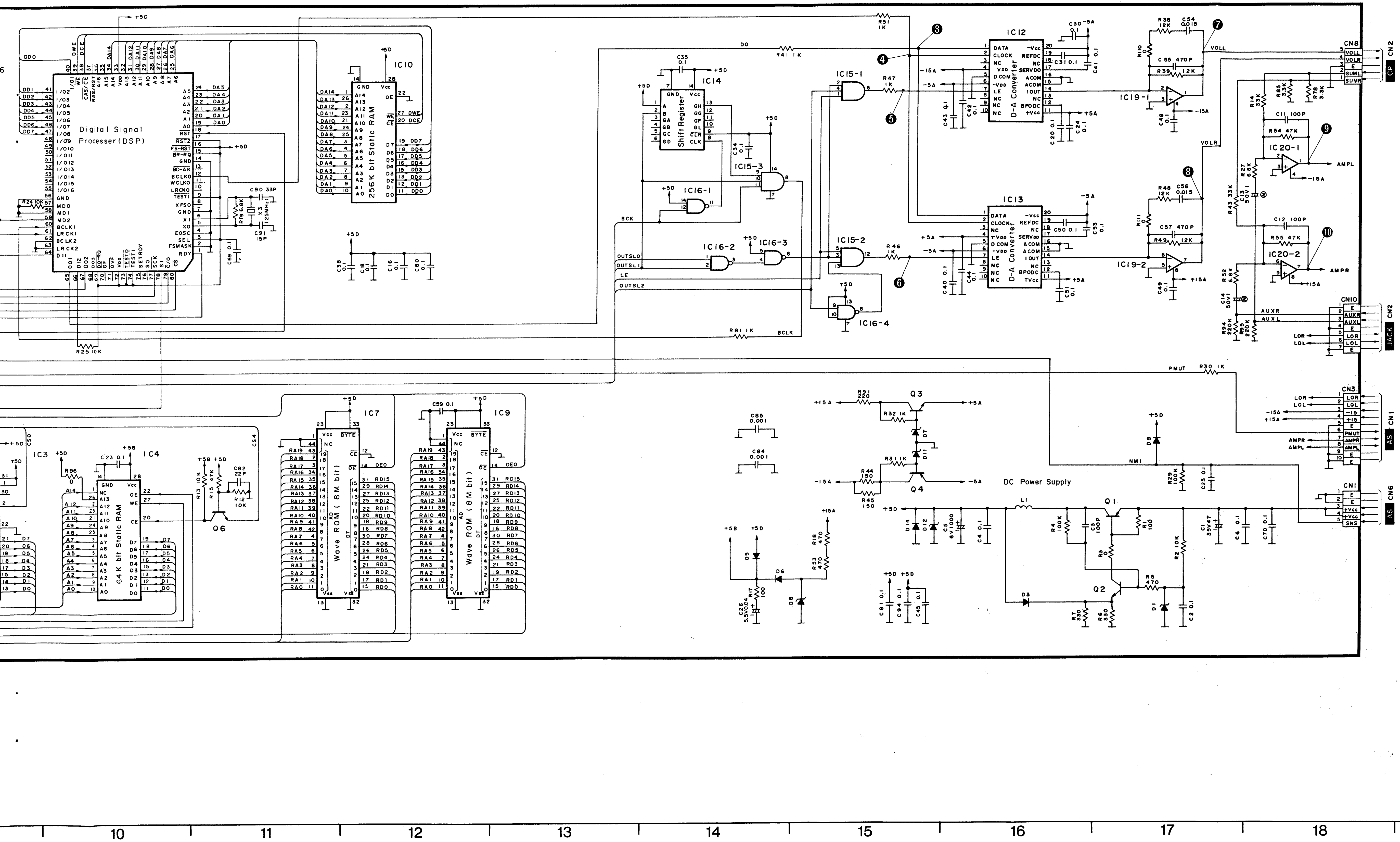


❾, ❿



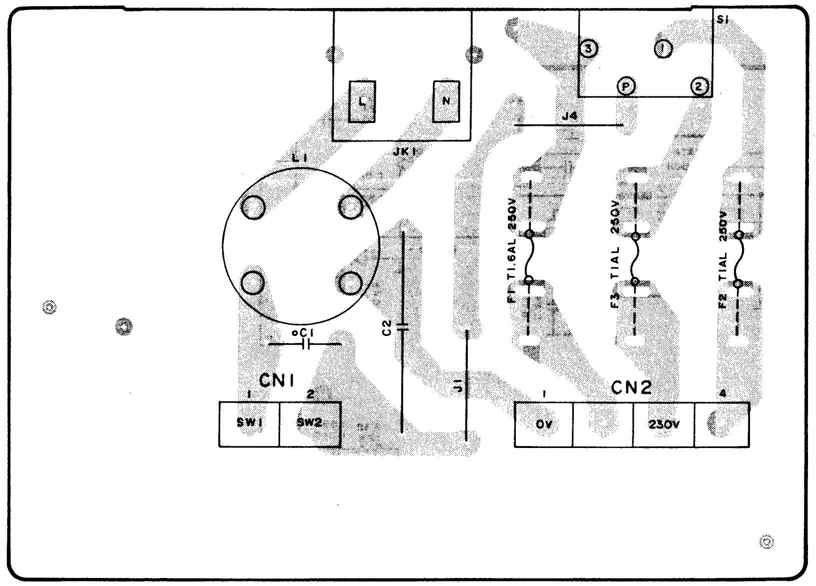
MAIN P.C. Diagram


MAIN
CP
CN1
CN6
MKB1
CN5
JACK
CN2
CHECK TERMINAL
CN7
Q5
IC1
Microcomputer
IC2
Gate Array
IC5
Tone Generator LSI
IC6
Digital Signal Processer (DSP)
IC3
Programmed EP ROM
IC4
64K bit Static RAM
(49MHz)
X2
X1
(14MHz)
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10


Digital Signal Processer (DSP)
IC10
256K bit Static RAM
IC14
Shift Register
IC15-1
IC15-2
IC15-3
IC16-1
IC16-2
IC16-3
IC16-4
IC12
D-A Converter
IC13
D-A Converter
IC19-1
IC19-2
IC20-1
IC20-2
VOLL
VOLR
AMPL
AMPR
AUXR
AUXL
LOR
LOL
PMUT
NMI
CN8
CN2
CP
CN10
JACK
CN3
CN1
AS
CN6
IC3
IC4
64K bit Static RAM
Q6
IC7
Wave ROM (8M bit)
IC9
Wave ROM (8M bit)
Q3
Q4
DC Power Supply
Q1
Q2
L1
X3 (25MHz)
R41 1K
R51 1K
R47 1K
R46 1K
R81 1K
R25 10K
R30 1K
BCK
BCLK
OUTSL0
OUTSL1
OUTSL2
LE
D0
+5D
+5A
-5A
+15A
-15A
+5B
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19

AS/ACP/HP P.C. Board

ACP X XR XS XD XT (SXPG215541)


JK1
L
N
S1
J4
L1
F1 T1.6AL 250V
F3 T1AL 250V
F2 T1AL 250V
C1
C2
J1
CN1
SW1
SW2
CN2
0V
230V
1
2
4

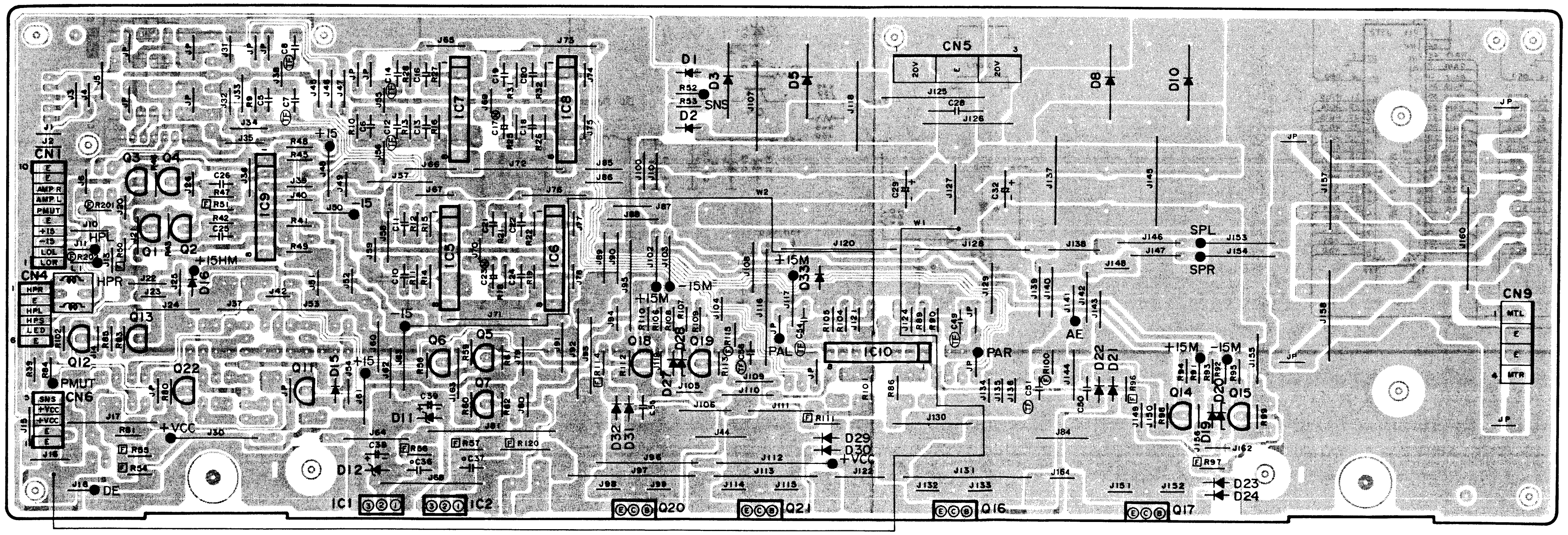
ACP

NOTE:

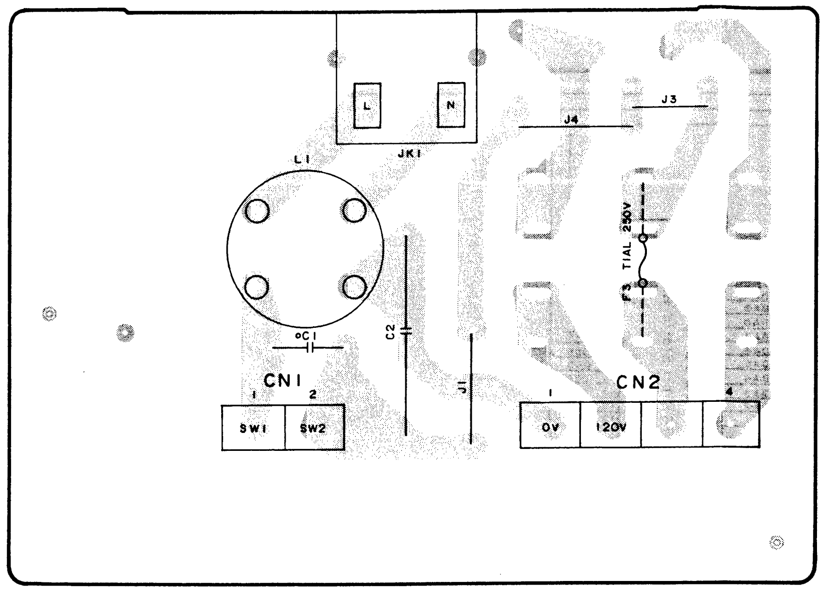
- FUSES

F1:	XBA2C16TB0
F2, F3:	XBA2C10TB0

日本向 (SXPG2147151)
Others (SXPG2147141)
AS M MC XM (SXPG2147121)


CN1
CN4
CN5
CN6
CN9
20V
20V
IC1
IC2
IC5
IC6
IC7
IC8
IC9
IC10
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
D1
D2
D3
D5
D8
D10
D11
D12
D15
D16
D21
D22
D23
D24
D29
D30
D33
HPL
HPR
+15HM
+15M
-15M
+15
-15
+VCC
SNS
SPL
SPR
PAL
PAR
AE
PMUT
DE
MTL
MTR
E

ACP Others (SXPG215551)


JK1
L
N
J3
J4
L1
F3 T1AL 250V
C1
C2
J1
CN1
SW1
SW2
CN2
0V
120V
1
2
4

ACP

NOTE:

- FUSE

F3:	XBA2C10TB0

AS

NOTES:

- IC'S

IC1:	SVIGM5F7815
IC2:	M5F79M15L
IC5~10:	SVIGM5218L

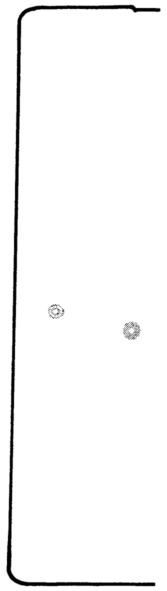
- TRANSISTORS

Q1, 3:	2SC3940ARS
Q2, 4:	2SA1534AR
Q5, 6, 13, 15, 19, 22:	2SA1015-GR
Q7, 11, 12, 14, 18:	2SC1815GR
Q16, 20:	2SB946P
Q17, 21:	2SD1271P

- DIODES

D1, 2:	SVDGERA1502
D3, 5, 8, 10:	SVDS3V20
D11, 12:	MA4180
D15, 19, 20, 21, 24, 27, 28, 30, 32	MA165
D16, 33:	EKO4
D22, 23, 29, 31:	MA167

ACP M M



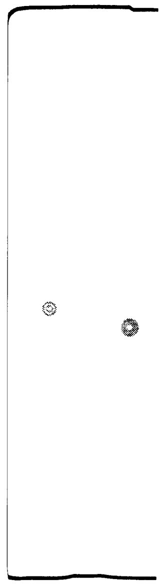
ACP

IOTE:

- FUSE

F1: XB.

ACP 日本向



CP

NTE:

- USE

1: XB/

F7815
15L
218L

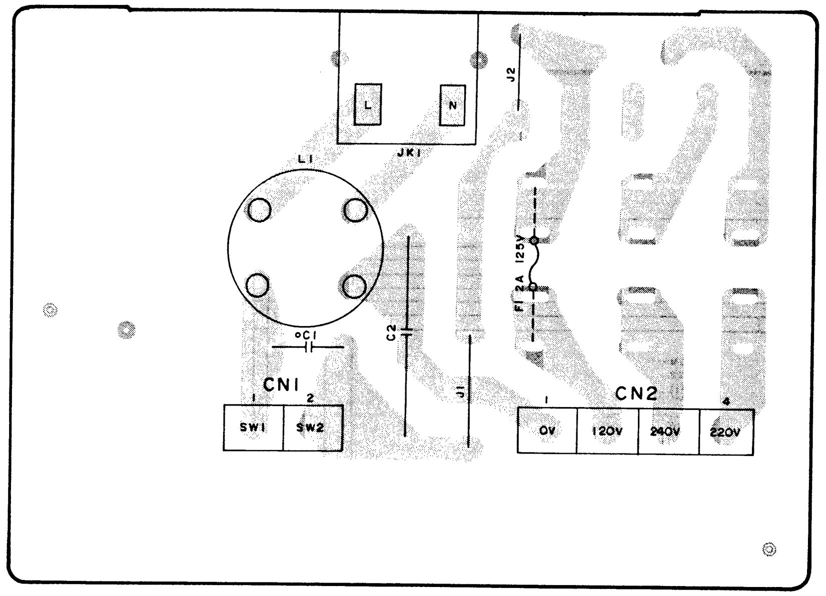
ARS
AR
-GR

GR

P

A1502
20

ACP M MC XM (SXPG215531)

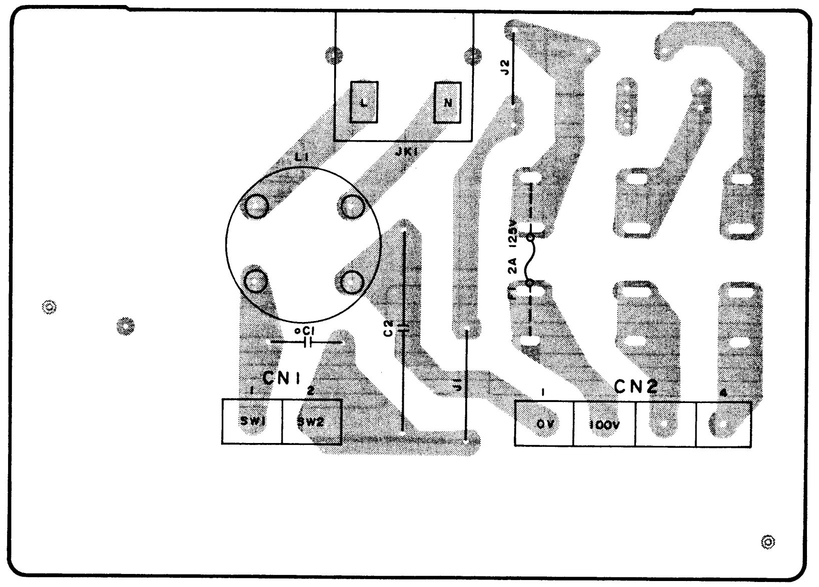

L
N
JK1
J2
L1
C1
C2
F1 2A 125V
J1
CN1
1
2
SW1
SW2
CN2
1
4
0V
120V
240V
220V

ACP

NOTE:

- FUSE
  F1: XBA1C40NU100

ACP 日本向 (SXPG215521)

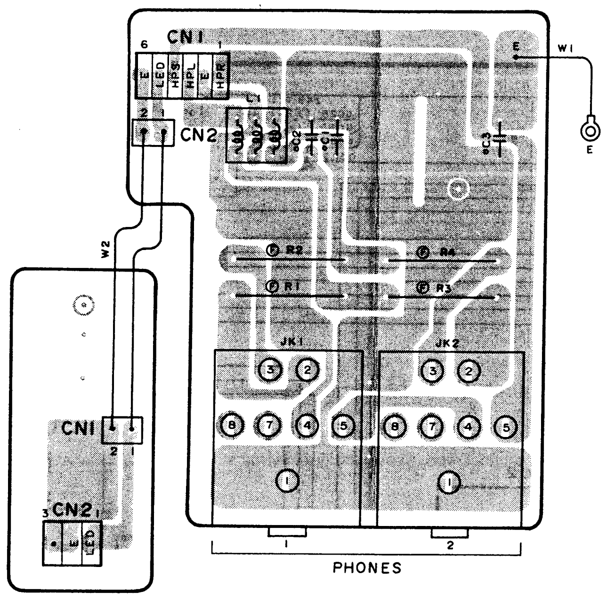

L
N
JK1
J2
L1
C1
C2
2A 125V
J1
CN1
1
2
SW1
SW2
CN2
1
4
0V
100V

ACP

NOTE:

- FUSE
  F1: XBA1C20NS5

HP (SXPG210861)


CN1
6
1
E
LED
HPS
HPL
E
HPR
CN2
C1
C2
C3
E
W1
E
W2
R2
R4
R1
R3
JK1
JK2
CN1
CN2
LED
1
2
PHONES

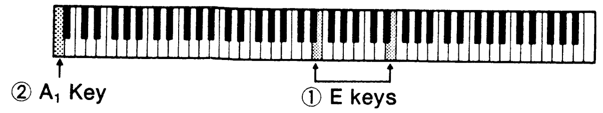
■ Measuring Condition ■ 波形の測定条件

Check Point ❸~❺
Set to the self-diagnostic mode followings.

- While pressing two E keys (①) simultaneously, turn on the power switch.

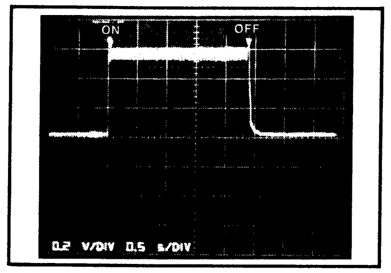
次のように自己診断モードに設定してください。

- 2つのEキー（①）を同時に押しながら、電源スイッチをオンする。
- SOUND .... GRAND PIANO
- Main Volume .... Center
- Keyboard .... A₁ (②)


② A₁ Key
① E keys

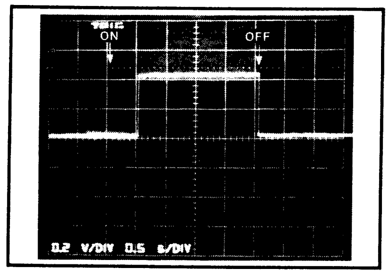
Check Point ❶, ❷
Set the initial setting mode (Refer to Page I-3)
チェックポイント❶、❷
イニシャルセッティングを行ってください。（I-3ページ参照）

❶ SNS



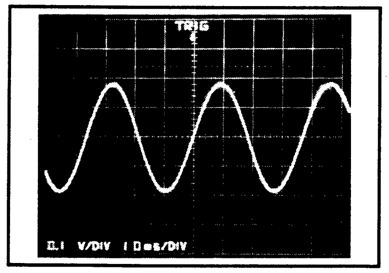
- Power SW .... ON → OFF

❷ PMUT

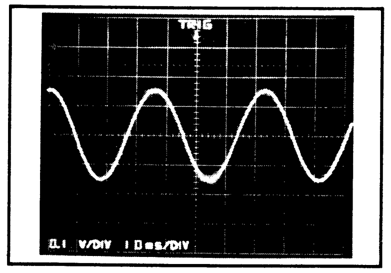


- Power SW .... ON → OFF

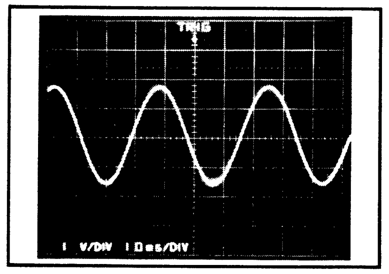
❸ HPL, HPR



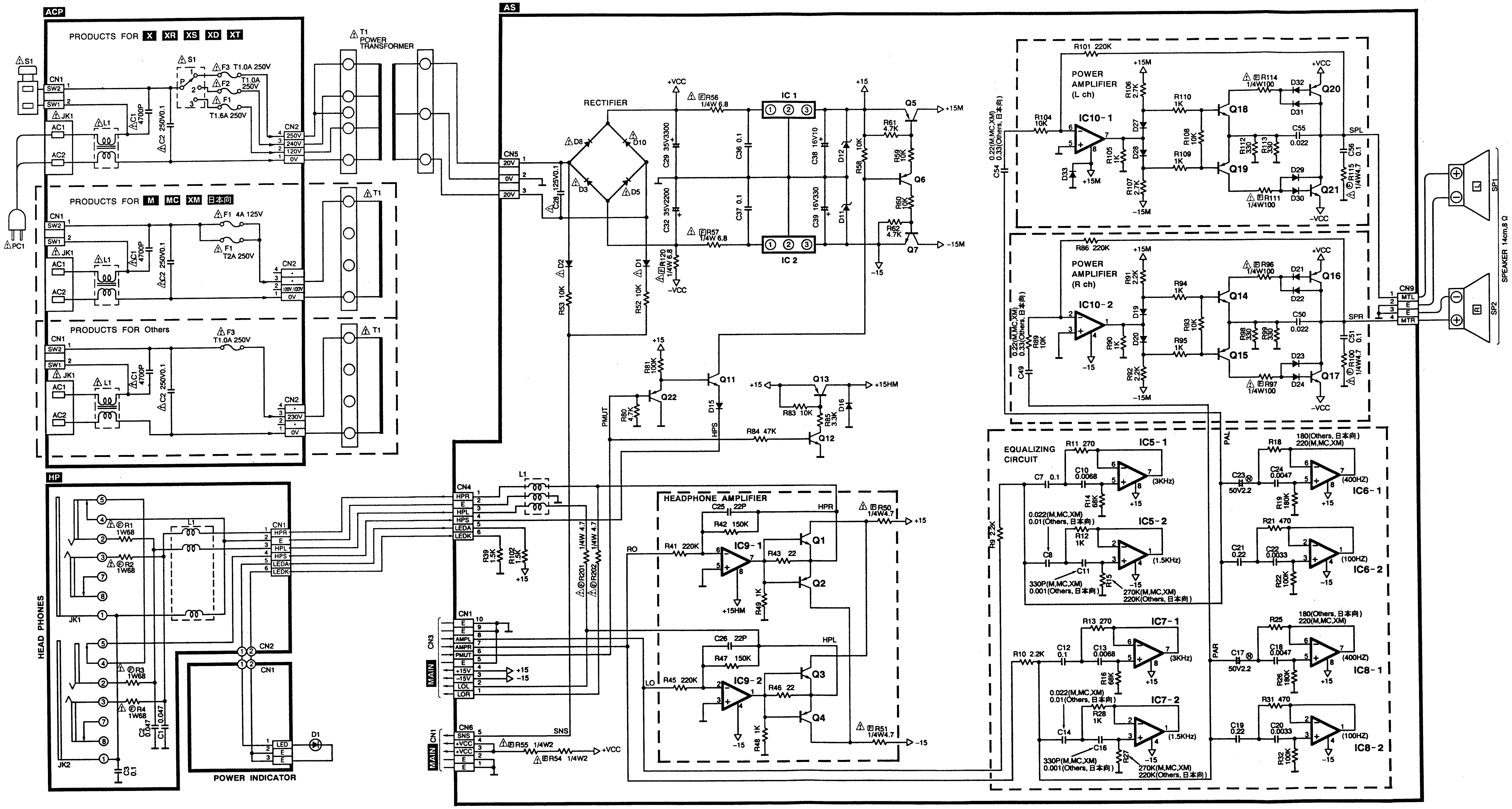
❹ PAL, PAR



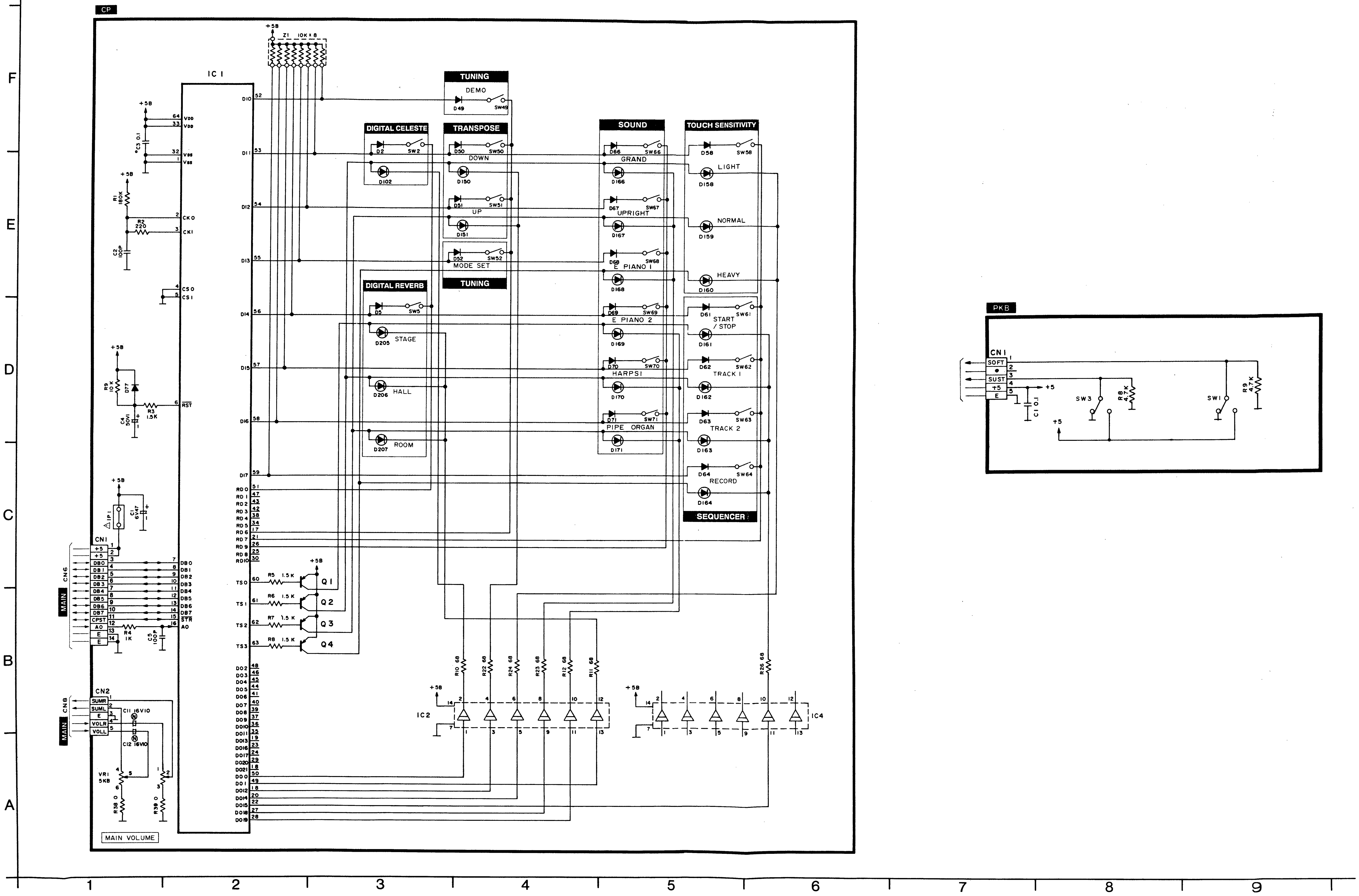
❺ SPL, SPR



AS/ACP/HP P.C. Diagram

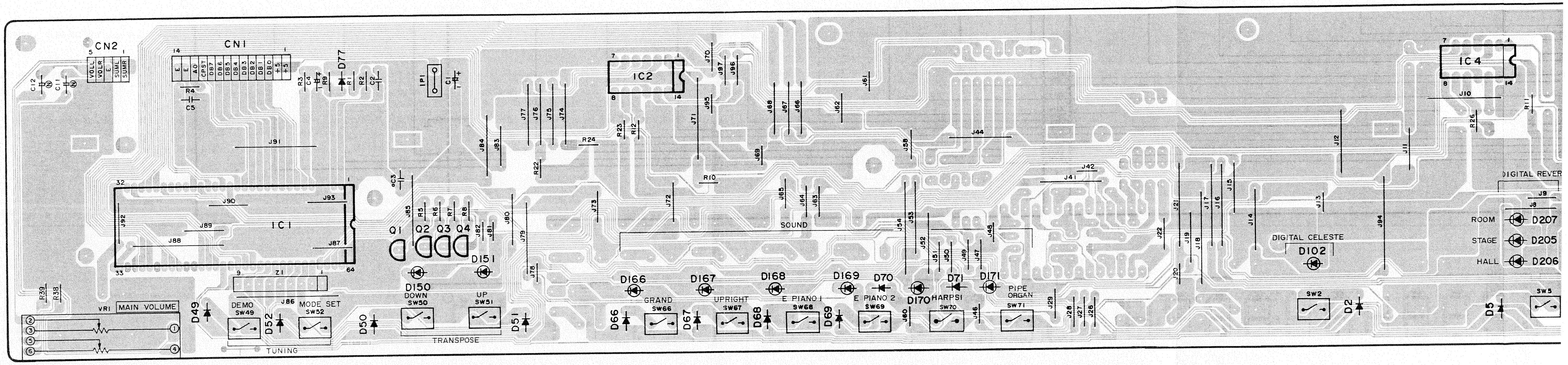

ACP
PRODUCTS FOR X XR XS XD XT
PRODUCTS FOR M MC XM 日本向
PRODUCTS FOR Others
S1
PC1
CN1
SW2
SW1
JK1
AC1
AC2
L1
C1 4700P
C2 250V0.1
F3 T1.0A 250V
F2 T1.0A 250V
F1 T1.6A 250V
F1 4A 125V
F1 T2A 250V
F3 T1.0A 250V
CN2
250V
240V
120V
0V
230V
T1 POWER TRANSFORMER
AS
CN5
20V
0V
RECTIFIER
D8
D10
D3
D5
D2
D1
C28 125V0.1
C29 35V3300
C32 35V2200
R56 1/4W 6.8
R57 1/4W 6.8
R120 1/4W 6.8
C36 0.1
C37 0.1
C38 16V10
C39 16V330
IC 1
IC 2
D12
D11
R58 10K
R61 4.7K
R59 10K
R60 10K
R62 4.7K
Q5
Q6
Q7
+15M
-15M
+VCC
-VCC
R53 10K
R52 10K
R81 100K
R80 4.7K
Q22
Q11
D15
PMUT
HPS
Q13
R83 10K
R85 3.3K
D16
+15HM
R84 47K
Q12
POWER AMPLIFIER (L ch)
POWER AMPLIFIER (R ch)
R101 220K
R104 10K
IC10-1
IC10-2
R106 2.7K
R105 1K
R107 2.7K
D27
D28
D33
R110 1K
R108 10K
R109 1K
Q18
Q19
R112 330
R113 330
R114 1/4W100
R111 1/4W100
D32
D31
D29
D30
Q20
Q21
C55 0.022
C56 0.1
R115 1/4W4.7
C54 0.22(M,MC,XM) 0.33(Others, 日本向)
SPL
SPR
R86 220K
R91 2.2K
R90 1K
R92 2.2K
D19
D20
R94 1K
R93 10K
R95 1K
Q14
Q15
R98 330
R99 330
R96 1/4W100
R97 1/4W100
D21
D22
D23
D24
Q16
Q17
C50 0.022
C51 0.1
R100 1/4W4.7
C49 0.22(M,MC,XM) 0.33(Others, 日本向)
R89 10K
CN9
MTL
E
MTR
SP1
SP2
L
R
SPEAKER 14cm,8Ω
PAL
PAR
EQUALIZING CIRCUIT
IC5-1
IC5-2
IC6-1
IC6-2
IC7-1
IC7-2
IC8-1
IC8-2
R11 270
C10 0.0068
C7 0.1
R14 68K
(3KHz)
0.022(M,MC,XM) 0.01(Others, 日本向)
R12 1K
C8
C11
R15
330P(M,MC,XM) 0.001(Others, 日本向)
270K(M,MC,XM) 220K(Others, 日本向)
(1.5KHz)
R9 2.2K
R18
180(Others, 日本向) 220(M,MC,XM)
C23 50V2.2
C24 0.0047
R19 180K
(400HZ)
R21 470
C21 0.22
C22 0.0033
R22 100K
(100HZ)
R13 270
R10 2.2K
C12 0.1
C13 0.0068
R16 68K
R28 1K
C14
C16
R27
R25
C17 50V2.2
C18 0.0047
R26 180K
R31 470
C19 0.22
C20 0.0033
R32 100K
HEADPHONE AMPLIFIER
C25 22P
R42 150K
RO
R41 220K
IC9-1
R43 22
Q1
Q2
R49 1K
HPR
HPL
C26 22P
R47 150K
LO
R45 220K
IC9-2
R46 22
Q3
Q4
R48 1K
R50 1/4W4.7
R51 1/4W4.7
+15
-15
CN4
HPR
E
HPL
HPS
LEDA
LEDK
L1
R39 1.5K
R102 1.5K
R201 1/4W 4.7
R202 1/4W 4.7
CN3
MAIN
CN1
AMPL
AMPR
PMUT
+15V
-15V
LOL
LOR
CN6
SNS
+VCC
R55 1/4W2
R54 1/4W2
SNS
HP
HEAD PHONES
JK1
JK2
R1 1W68
R2 1W68
R3 1W68
R4 1W68
C2 0.047
C1 0.047
C3 0.1
CN2
CN1
LED
D1
POWER INDICATOR
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

CP/PKB P.C. Diagram

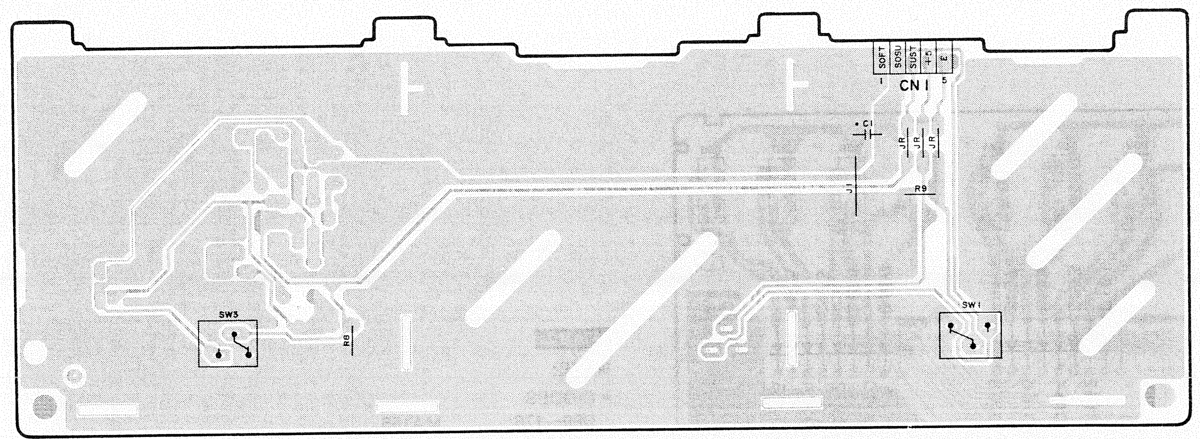

CP
IC 1
+5B
Z1 10K×8
VDD
VSS
CKO
CKI
CS0
CS1
RST
R1 180K
R2 220
C2 100P
C3 0.1
R9 10K
D77
R3 1.5K
C4 50V1
IP1
C1 6V47
CN1
CN6
MAIN
+5
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
CPST
A0
E
STR
R4 1K
C5 100P
CN2
CN8
SUMR
SUML
VOLR
VOLL
C11 16V10
C12 16V10
VR1 5KB
R38 0
R39 0
MAIN VOLUME
DI0
DI1
DI2
DI3
DI4
DI5
DI6
DI7
RD0
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
RD9
RD10
TS0
TS1
TS2
TS3
R5 1.5K
R6 1.5K
R7 1.5K
R8 1.5K
Q1
Q2
Q3
Q4
DO0
DO1
DO2
DO3
DO4
DO5
DO6
DO7
DO8
DO9
DO10
DO11
DO12
DO13
DO14
DO15
DO16
DO17
DO18
DO19
DO20
DO21
TUNING
DEMO
D49
SW49
DIGITAL CELESTE
D2
SW2
D102
TRANSPOSE
D50
SW50
DOWN
D150
D51
SW51
UP
D151
D52
SW52
MODE SET
TUNING
DIGITAL REVERB
D5
SW5
D205
STAGE
D206
HALL
D207
ROOM
SOUND
D66
SW66
GRAND
D166
D67
SW67
UPRIGHT
D167
D68
SW68
E PIANO 1
D168
D69
SW69
E PIANO 2
D169
D70
SW70
HARPSI
D170
D71
SW71
PIPE ORGAN
D171
TOUCH SENSITIVITY
D58
SW58
LIGHT
D158
NORMAL
D159
HEAVY
D160
D61
SW61
START / STOP
D161
D62
SW62
TRACK 1
D162
D63
SW63
TRACK 2
D163
D64
SW64
RECORD
D164
SEQUENCER
R10 68
R22 68
R24 68
R23 68
R12 68
R11 68
R26 68
IC2
IC4
PKB
CN1
SOFT
SUST
+5
E
C1 0.1
SW3
R8 4.7K
SW1
R9 4.7K
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

CP/PKB P.C. Board

CP (SXPG214841)


CN2
VOLL
VOLR
E
SUML
SUMR
CN1
E
E
A0
CPST
DB7
DB6
DB5
DB4
DB3
DB2
DB1
DB0
+5
+5
C12
C11
R4
C5
R3
C4
R9
R1
D77
R2
C2
IP1
C1
IC2
IC4
J10
R26
R11
IC1
J91
J90
J93
J92
J89
J88
J87
C3
Q1
Q2
Q3
Q4
R5
R6
R7
R8
J85
J82
J81
J80
J79
J78
J84
J83
J77
J76
J75
J74
R24
R22
R23
R12
J73
J72
J71
J70
J97
J96
J95
R10
J69
J68
J67
J66
J65
J64
J63
J62
J61
J58
J44
J42
J41
SOUND
J54
J53
J52
J51
J50
J49
J48
J47
J46
J21
J22
J20
J19
J18
J17
J16
J15
J14
J13
J12
J11
J94
J29
J28
J27
J26
J9
J8
DIGITAL REVER
DIGITAL CELESTE
D102
ROOM
D207
STAGE
D205
HALL
D206
Z1
J86
D150
DOWN
SW50
UP
SW51
D151
D166
GRAND
SW66
D167
UPRIGHT
SW67
D168
E PIANO 1
SW68
D169
E PIANO 2
SW69
D70
D170
D71
HARPSI
SW70
D171
PIPE ORGAN
SW71
SW2
D2
D5
SW5
R39
R38
VR1
MAIN VOLUME
D49
DEMO
SW49
D52
MODE SET
SW52
TUNING
D50
TRANSPOSE
D51
D66
D67
D68
D69
J60

PKB (SXPG218231)


SOFT
SOSU
SUST
+5
E
CN1
C1
J1
R9
SW3
R8
SW1

F

E

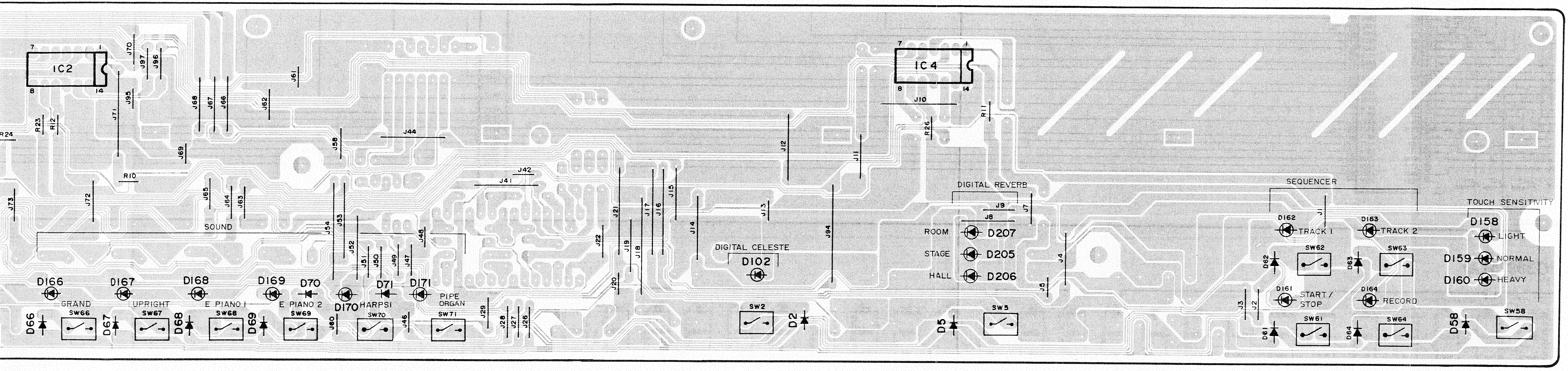
D

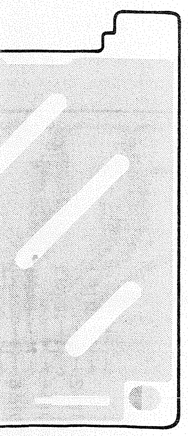
C

B

A

1 2 3 4 5 6 7 8 9


IC2
IC4
R23
R12
R24
R10
R26
R11
J70
J97
J96
J95
J71
J68
J67
J66
J62
J61
J69
J58
J44
J42
J41
J10
J12
J11
J73
J72
J65
J64
J63
J54
J53
J52
J51
J50
J49
J47
J48
J46
J80
J29
J28
J27
J26
J22
J21
J20
J19
J18
J17
J16
J15
J14
J13
J94
J9
J8
J7
J5
J4
J3
J2
J1
SOUND
D166
D167
D168
D169
D70
D170
D71
D171
GRAND
UPRIGHT
E PIANO 1
E PIANO 2
HARPSI
PIPE ORGAN
SW66
SW67
SW68
SW69
SW70
SW71
D66
D67
D68
D69
DIGITAL CELESTE
D102
SW2
D2
DIGITAL REVERB
ROOM
STAGE
HALL
D207
D205
D206
D5
SW5
SEQUENCER
D162
TRACK 1
D163
TRACK 2
SW62
SW63
D62
D63
D161
START / STOP
D164
RECORD
SW61
SW64
D61
D64
TOUCH SENSITIVITY
D158
LIGHT
D159
NORMAL
D160
HEAVY
D58
SW58



CP

NOTES:

- IC'S

IC1:	SVIGM603A121
IC2, 4:	HD74LS07P

- TRANSISTORS

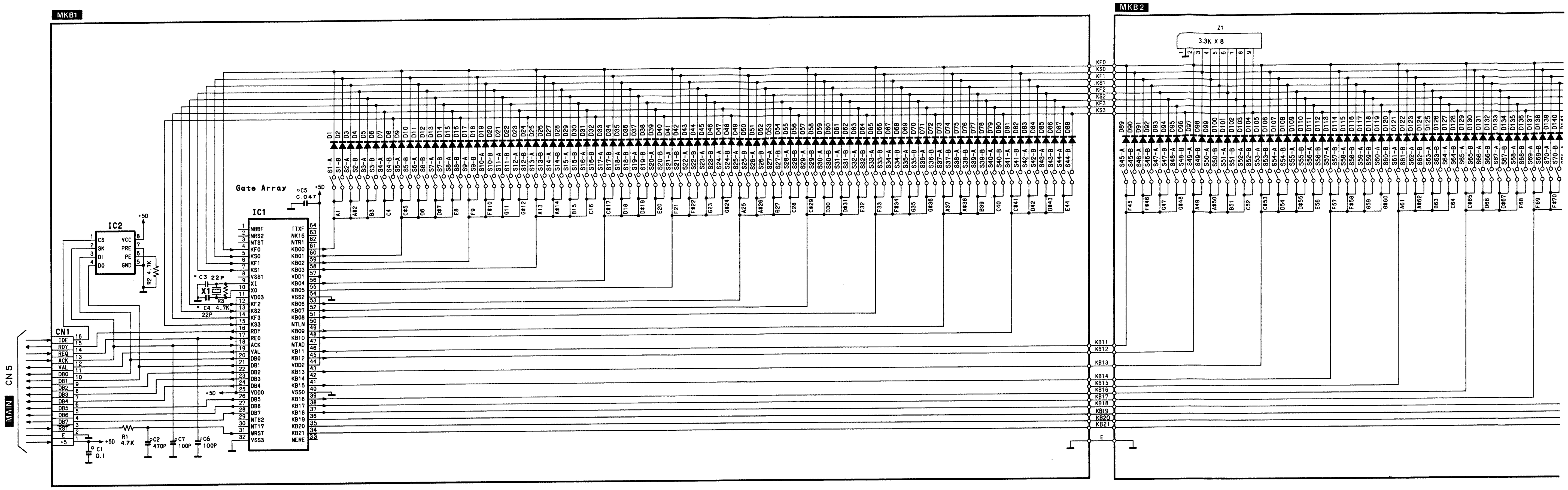
Q1~4:	2SA1015-GR

- DIODES

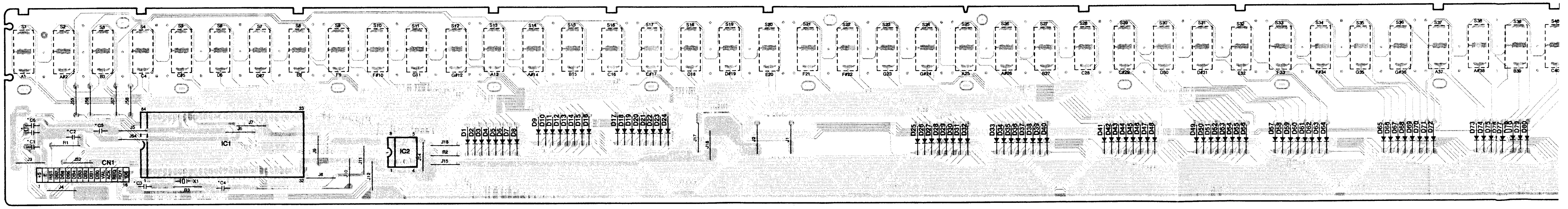
D2, 5, 49~52, 58, 61~64, 66~71:	MA165
D102, 150, 151, 158~164, 166~171, 205~207:	LN282R

5 6 7 8 9 10 11 12 13 14

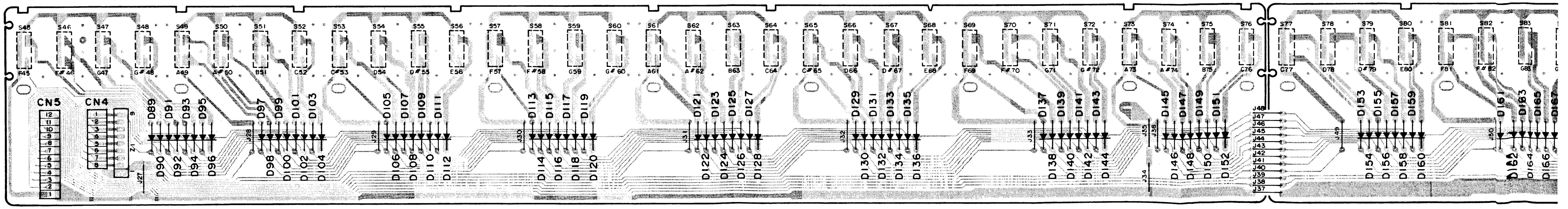
MKB1/2

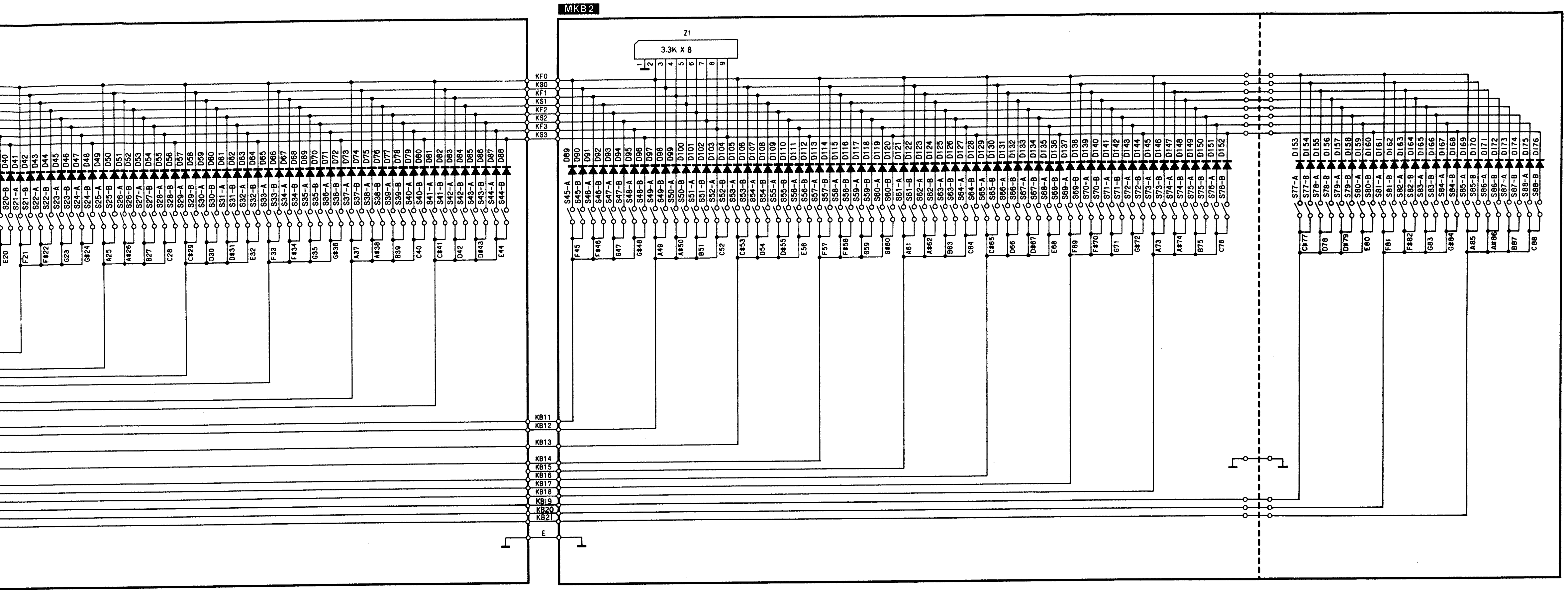

MKB1
MKB2
IC1
Gate Array
IC2
CN1
CN 5
MAIN
Z1
3.3k X 8
X1
C3 22P
C4 22P
R3 4.7K
R2 4.7K
R1 4.7K
C1 0.1
C2 470P
C7 100P
C6 100P
C5 C.047
+5D

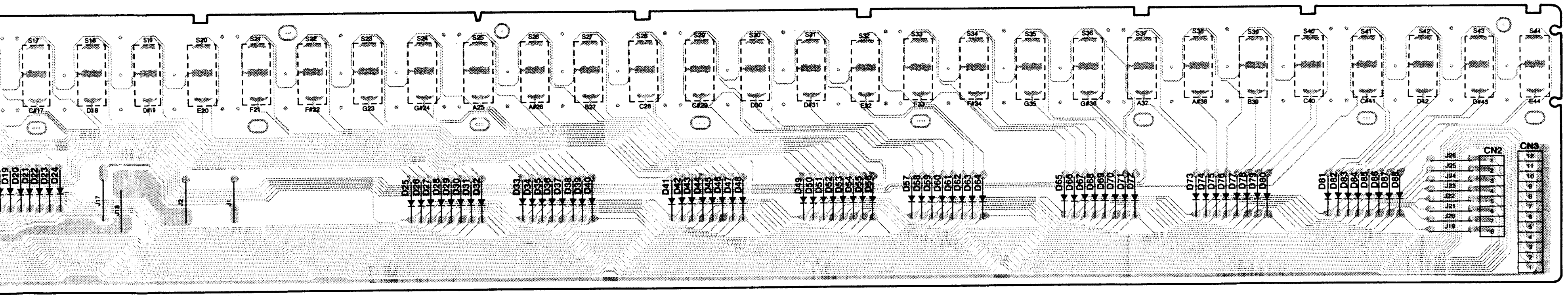
MKB1 (SXPG209751A)

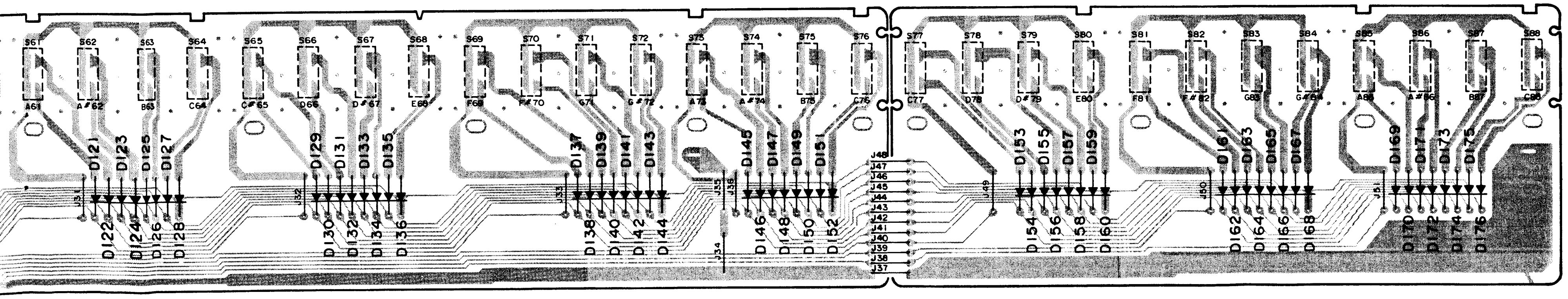


MKB2 (SXPG209751B)




MKB2
Z1
3.3k X 8
KF0
KS0
KF1
KS1
KF2
KS2
KF3
KS3
KB11
KB12
KB13
KB14
KB15
KB16
KB17
KB18
KB19
KB20
KB21
E





MKB1

NOTES:

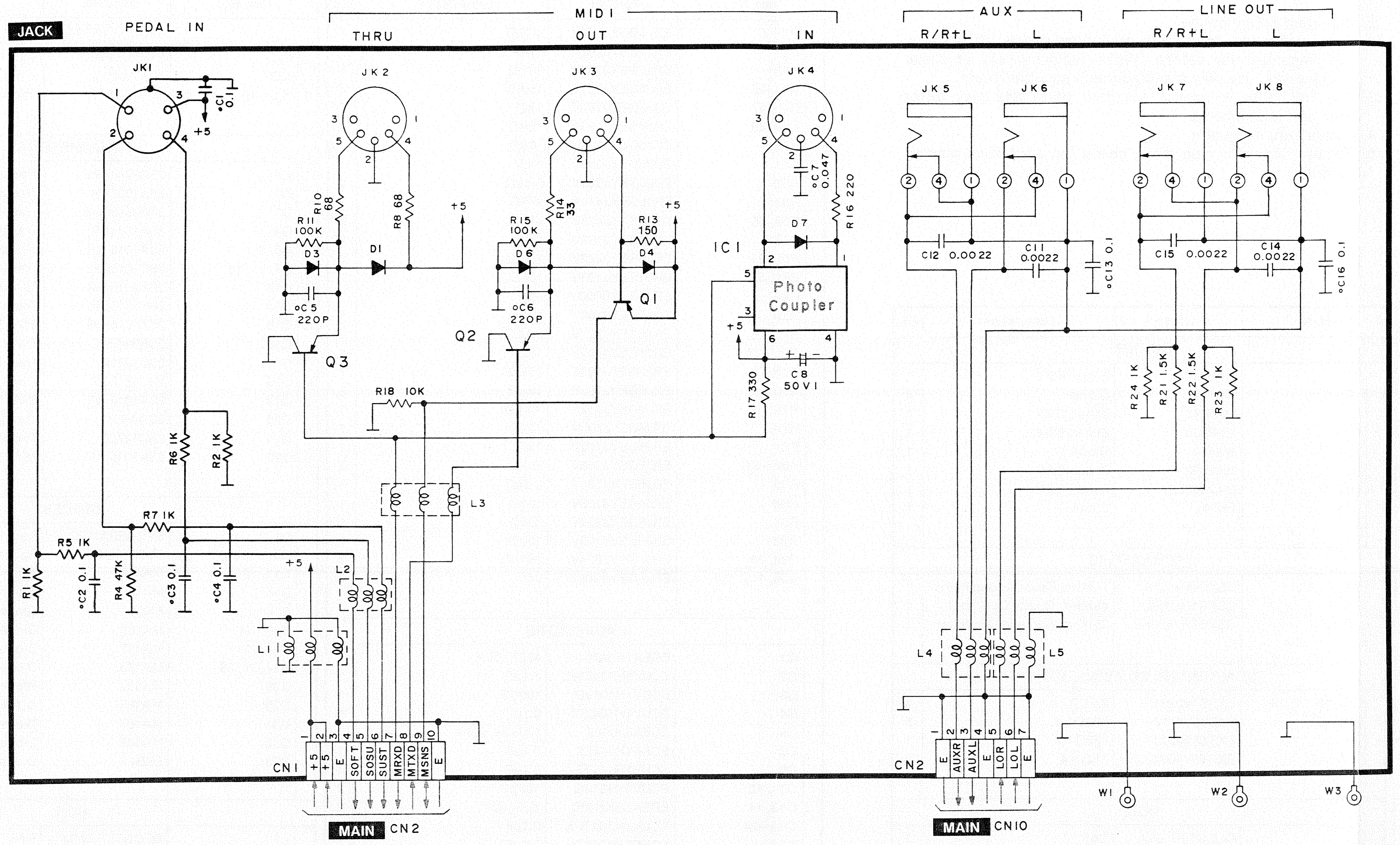
- IC'S
  - IC1: MSM7U042016
  - IC2: ST93C46CB1
- DIODES
  - D1~88: MA165

MKB2

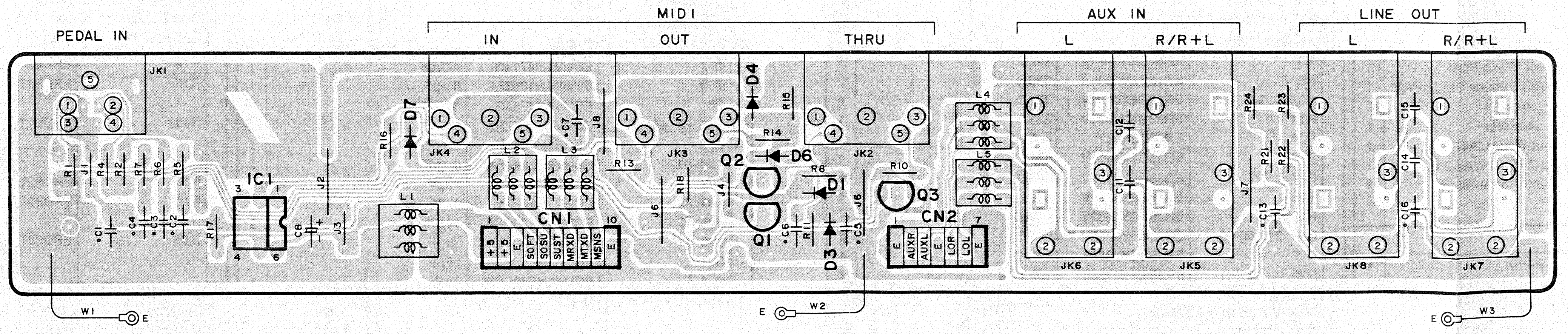
NOTE:

- DIODES
  - D89~176: MA165

JACK


JACK
PEDAL IN
MIDI
THRU
OUT
IN
AUX
R/R+L
L
LINE OUT
R/R+L
L
JK1
JK2
JK3
JK4
JK5
JK6
JK7
JK8
C1 0.1
+5
R10 68
R11 100K
D3
D1
R8 68
C5 220P
Q3
R15 100K
R14 33
D6
C6 220P
Q2
R13 150
D4
Q1
C7 0.047
R16 220
D7
IC1
Photo Coupler
C8 50V1
R17 330
R18 10K
C12 0.0022
C11 0.0022
C13 0.1
C15 0.0022
C14 0.0022
C16 0.1
R24 1K
R21 1.5K
R22 1.5K
R23 1K
R6 1K
R2 1K
R7 1K
R5 1K
R1 1K
C2 0.1
R4 47K
C3 0.1
C4 0.1
L1
L2
L3
L4
L5
CN1
+5
+5
E
SOFT
SOSU
SUST
MRXD
MTXD
MSNS
E
MAIN CN2
CN2
E
AUXR
AUXL
E
LOR
LOL
E
MAIN CN10
W1
W2
W3

JACK (SXPG219611)


PEDAL IN
MIDI
IN
OUT
THRU
AUX IN
L
R/R+L
LINE OUT
L
R/R+L
JK1
JK4
JK3
JK2
JK6
JK5
JK8
JK7
IC1
L1
L2
L3
L4
L5
CN1
+5
+5
E
SOFT
SOSU
SUST
MRXD
MTXD
MSNS
E
CN2
E
AUXR
AUXL
E
LOR
LOL
E
D7
D4
D6
D1
D3
Q1
Q2
Q3
R1
R4
R7
R6
R5
R17
R16
R13
R18
R15
R14
R8
R10
R11
R24
R23
R21
R22
C1
C4
C3
C2
C8
C7
C6
C5
C12
C11
C13
C15
C14
C16
J1
J2
J3
J4
J6
J7
J8
W1
W2
W3
E

JACK

NOTES:

- IC'S
  IC1: SVIGTLP513
- TRANSISTORS
  Q1~3: 2SA1015-GR
- DIODES
  D1, 3, 4, 6, MA165
  7:

REPLACEMENT PARTS LIST......P.C.B. and Wiring Parts

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retension period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.
   After the end of this period, the assembly will no longer be available.
2. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. The "S" mark is service standard parts and may differ from production parts.
4. ○ mark are new parts.
5. For part No. with area mark, check the area when placing an order.

■ PRINTED CIRCUIT BOARD

	RTL	Area	Part No.	Description	P/S
○	RTL		SXPG214691	MAIN	1
○	RTL	M MC XM	SXPG2147141	AS	1
○	RTL	EN EK EZ EW EF EA EH EP X XL XR XS XD XT	SXPG2147121	AS	1
	RTL	M MC XM	SXPG215531	ACP	1
○	RTL	EN EK EZ EW EF EA EH EP XL	SXPG215551	ACP	1
	RTL	X XR XS XD XT	SXPG215541	ACP	1
	RTL		SXPG210861	HP	1
	RTL		SXPG214841	CP	1
	RTL		SXPG219611	JACK	1
○	RTL		SXPG209751A	MKB1	1
○	RTL		SXPG209751B	MKB2	1
	RTL		SXPG218231	PKB	1

MAIN MAIN CIRCUIT

	Ref. No.	Part No.	Description	P/S
		INTEGRATED CIRCUITS		
	IC1	SVIGD70320GJ	16 bit Microcomputer	1
	IC2	D65012GF-A79	Gate Array	1
	IC3	QSIG03C02013	2M bit programmed ROM	1
	IC4	M5256BFP85LL	256K bit STATIC RAM	1
	IC5	TC25540AF006	Tone Generator LSI	1
	IC6	D6382GF-3B9	Digital Signal Processor	1
	IC7	QSIGH3C16CN9	16M bit Wave ROM	1
	IC9	QSIGH3C16CR0	16M bit Wave ROM	1
	IC10	HM65256BLF10	256K bit Pseudo Static RAM	1
	IC12, 13	PCM1702U	D-A Converter	2
	IC14	D74HC164GS	Shift Resister	1
	IC15	D74HC11GS	3 input AND GATES	1
	IC16	D74HC00GS	Quad 2 input NAND GATES	1
	IC19, 20	M5218AFP	Operational Amplifier	2
		TRANSISTORS		
	Q1	2SB941	Transistor	1
S	Q2, 3	2SC1815GR	Transistor	2
S	Q4	2SA1015-GR	2SA933STRS (SUB. Part)	1
	Q5	2SB709AR	Transistor	1
	Q6	2SD601AQ	Transistor	1
		DIODES		
	D1	MA8047	Zener, 4.7V	1
	D3~6	MA110	Diode	4
	D7	MA8062	Zener, 6.2V	1
	D8	MA8056	Zener, 5.6V	1
	D9	MA110	Diode	1
	D11	MA8062	Zener, 6.2V	1
	D12	MA2062LF	Zener, 6.2V	1
	D14	EK04	Diode	1
		OSCILLATORS		
	X1	QSXG2F1400A	14MHz, Ceramic Oscillator	1
	X2	QSXG1I4915A	49MHz, Quartz Oscillator	1
	X3	QSXG2F2500A	25MHz, Ceramic Oscillator	1
		COMPONENT COMBINATIONS		
	Z14, 15, 17, 18	EXBS8V222J	2.2kΩ × 4	4
	Z31~35	EXBV8V471J	470Ω × 4	5
	Z36	EXBS8V471J	470Ω × 4	1
	Z45~47	EXBV8V102J	1kΩ × 4	3
		COIL		
	L1	QLCGTJR10KA	Coil	1
		RESISTORS		
	R1	ERJ6GEYJ101V	100Ω	1
	R2	ERJ6GEYJ103V	10kΩ	1
	R3	ERJ6GEY0R00V	0Ω	1
	R4	ERJ6GEYJ104V	100kΩ	1
	R5	ERJ6GEYJ471V	470Ω	1
	R6, 7	ERJ6GEYJ331V	330Ω	2
	R9, 10, 12, 13	ERJ6GEYJ103V	10kΩ	4
	R14	ERJ6GEYJ333V	33kΩ	1
	R15	ERJ6GEYJ472V	4.7kΩ	1
	R16	ERJ6GEYJ102V	1kΩ	1
	R17	ERJ6GEYJ101V	100Ω	1
	R18	ERJ6GEYJ471V	470Ω	1
	R19	ERJ6GEYJ682V	6.8kΩ	1
	R20, 21, 24, 25	ERJ6GEYJ103V	10kΩ	4
	R27	ERJ6GEYJ682V	6.8kΩ	1
	R29	ERJ6GEYJ104V	100kΩ	1
	R30~32	ERJ6GEYJ102V	1kΩ	3
	R34	ERJ6GEYJ224V	220kΩ	1
	R36	ERJ6GEYJ104V	100kΩ	1
	R37	ERJ6GEYJ472V	4.7kΩ	1
	R38, 39	ERJ6GEYJ123V	12kΩ	2
	R40	ERJ6GEYJ472V	4.7kΩ	1
	R41	ERJ6GEYJ102V	1kΩ	1
	R43	ERJ6GEYJ333V	33kΩ	1
	R44, 45	ERJ6GEYJ151V	150Ω	2
	R46, 47	ERJ6GEYJ102V	1kΩ	2
	R48, 49	ERJ6GEYJ123V	12kΩ	2
	R50	ERJ6GEYJ103V	10kΩ	1
	R51	ERJ6GEYJ102V	1kΩ	1
	R52	ERJ6GEYJ682V	6.8kΩ	1
	R53	ERJ6GEYJ471V	470Ω	1
	R54, 55	ERJ6GEYJ473V	47kΩ	2
	R57	ERJ6GEYJ102V	1kΩ	1
	R58, 59	ERJ6GEYJ222V	2.2kΩ	2
	R61, 62	ERJ6GEYJ103V	10kΩ	2
	R64	ERJ6GEY0R00V	0Ω	1
	R69	ERJ6GEYJ103V	10kΩ	1
	R70	ERJ6GEYJ222V	2.2kΩ	1
	R71~74	ERJ6GEYJ102V	1kΩ	4
	R75	ERJ6GEYJ103V	10kΩ	1
	R76	ERJ6GEYJ103V	10kΩ	1
	R78	ERJ6GEYJ332V	3.3kΩ	1
	R79	ERJ6GEYJ103V	10kΩ	1
	R81	ERJ6GEYJ102V	1kΩ	1
	R82~84	ERJ6GEYJ103V	10kΩ	3
	R85	ERJ6GEYJ332V	3.3kΩ	1
	R86	ERJ6GEYJ103V	10kΩ	1
	R91	ERJ6GEYJ221V	220Ω	1
	R93	ERJ6GEYJ103V	10kΩ	1
	R94, 95	ERJ6GEYJ224V	220kΩ	2
	R96, 110, 111	ERJ6GEY0R00V	0Ω	3
		CAPACITORS		
	C1	ECEA1VU470	47μF, 35V	1
	C2	ECUV1H104ZFX	0.1μF	1
	C3	ECUV1H101JG	100pF	1
	C4	ECUV1H104ZFX	0.1μF	1
	C5	ECEA0JU102	1000μF, 6.3V	1
	C6	ECRF1H104ZF	0.1μF	1
	C8	ECUV1H104ZFX	0.1μF	1
	C11, 12	ECUV1H101JG	100pF	2
	C13, 14	ECEA1HKN010	1μF, 50V	2
	C16~24	ECUV1H104ZFX	0.1μF	9
	C25	ECRF1H104ZF	0.1μF	1
	C26	FM0H473	0.04μ, 5.5V	1
	C30, 31, 34, 35, 38, 40~45, 48~51, 53	ECUV1H104ZFX	0.1μF	16
	C54	ECQB1H153JF	0.015μF	1
	C55	ECUV1H471JG	470pF	1
	C56	ECQB1H153JF	0.015μF	1
	C57	ECUV1H471JG	470pF	1
	C59	ECUV1H104ZFX	0.1μF	1
	C61	ECUV1H101JG	100pF	1
	C62, 63, 66, 69	ECUV1H104ZFX	0.1μF	4
	C70	ECRF1H104ZF	0.1μF	1
	C80, 81	ECUV1H104ZFX	0.1μF	2
	C82	ECUV1H220JN	22pF	1
	C84, 85	ECUV1H102JX	0.001μF	2
	C86, 87	ECUV1H100DCN	10pF	2
	C90	ECUV1H330JCN	33pF	1
	C91	ECUV1H150JCN	15pF	1
	C92	ECUV1H030CCN	3pF	1
	C94	ECUV1H104ZFX	0.1μF	1

AS AMP & POWER SUPPLY CIRCUIT

	Ref. No.	Part No.	Description	P/S
		INTEGRATED CIRCUITS		
	IC1	SVIGM5F7815	+15V Voltage Regulator	1
	IC2	M5F79M15L	−15V Voltage Regulator	1
S	IC5~10	SVIGM5218L	Operational Amplifier	6
		TRANSISTORS		
	Q1	2SC3940ARS	Transistor	1
	Q2	2SA1534AR	Transistor	1
	Q3	2SC3940ARS	Transistor	1
	Q4	2SA1534AR	Transistor	1
S	Q5, 6	2SA1015-GR	2SA933STRS (SUB. Part)	2
S	Q7, 11, 12	2SC1815GR	Transistor	3
S	Q13	2SA1015-GR	2SA933STRS (SUB. Part)	1
S	Q14	2SC1815GR	Transistor	1
S	Q15	2SA1015-GR	2SA933STRS (SUB. Part)	1
	Q16	2SB946P	Transistor	1
	Q17	2SD1271P	Transistor	1
S	Q18	2SC1815GR	Transistor	1
S	Q19	2SA1015-GR	2SA933STRS (SUB. Part)	1
	Q20	2SB946P	Transistor	1
	Q21	2SD1271P	Transistor	1
S	Q22	2SA1015-GR	2SA933STRS (SUB. Part)	1
		DIODES		
	D1, 2 ⚠	SVDGERA1502	Rectifier	2
	D3, 5, 8, 10 ⚠	SVDS3V20	Rectifier	4
	D11, 12	MA4180	Zener, 18V	2
	D15	MA165	Diode	1
	D16	EK04	Diode	1
	D19~21	MA165	Diode	3
	D22, 23	MA167	Diode	2
	D24, 27, 28	MA165	Diode	3
	D29	MA167	Diode	1
	D30	MA165	Diode	1
	D31	MA167	Diode	1
	D32	MA165	Diode	1
	D33	EK04	Diode	1
		COIL		
	L1	QLQGT3T150SA	Coil	1
		RESISTORS		
	R9, 10	ERDS2TJ222	2.2kΩ	2
	R11	ERDS2TJ271	270Ω	1
	R12	ERDS2TJ102	1kΩ	1
	R13	ERDS2TJ271	270Ω	1
	R14	ERDS2TJ683	68kΩ	1
	R15	ERDS2TJ274	270kΩ M MC XM	1
	R15	ERDS2TJ224	220kΩ EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
	R16	ERDS2TJ683	68kΩ	1
	R18	ERDS2TJ221	220Ω M MC XM	1
	R18	ERDS2TJ181	180Ω EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
	R19	ERDS2TJ184	180kΩ	1
	R21	ERDS2TJ471	470Ω	1
	R22	ERDS2TJ104	100kΩ	1
	R25	ERDS2TJ221	220Ω M MC XM	1

Ref. No.	Part No.	Description	P/S
R25	ERDS2TJ181	180Ω EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
R26	ERDS2TJ184	180kΩ	1
R27	ERDS2TJ274	270kΩ M MC XM	1
R27	ERDS2TJ224	220kΩ EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
R28	ERDS2TJ102	1kΩ	1
R31	ERDS2TJ471	470Ω	1
R32	ERDS2TJ104	100kΩ	1
R39	ERDS2TJ152	1.5kΩ	1
R41	ERDS2TJ224	220kΩ	1
R42	ERDS2TJ154	150kΩ	1
R43	ERDS2TJ220	22Ω	1
R45	ERDS2TJ224	220kΩ	1
R46	ERDS2TJ220	22Ω	1
R47	ERDS2TJ154	150kΩ	1
R48, 49	ERDS2TJ102	1kΩ	2
R50, 51 ⚠	ERD2FCVJ4R7	4.7Ω, 1/4W, Fuse Type	2
R52, 53	ERDS2TJ103	10kΩ	2
R54, 55 ⚠	ERQ14AJ2R0	2Ω, 1/4W, Fuse Type	2
R56, 57 ⚠	ERD2FCVJ6R8	6.8Ω, 1/4W, Fuse Type	2
R58~60	ERDS2TJ103	10kΩ	3
R61, 62, 80	ERDS2TJ472	4.7kΩ	3
R81	ERDS2TJ104	100kΩ	1
R83	ERDS2TJ103	10kΩ	1
R84	ERDS2TJ473	47kΩ	1
R85	ERDS2TJ332	3.3kΩ	1
R86	ERDS2TJ224	220kΩ	1
R89	ERDS2TJ103	10kΩ	1
R90	ERDS2TJ102	1kΩ	1
R91, 92	ERDS2TJ272	2.7kΩ	2
R93	ERDS2TJ103	10kΩ	1
R94, 95	ERDS2TJ102	1kΩ	2
R96, 97 ⚠	ERD2FCVG101	100Ω, 1/4W, Fuse Type	2
R98, 99	ERDS2TJ331	330Ω	2
R100 ⚠	ERD25FVJ4R7	4.7Ω, 1/4W, Flame-Proof	1
R101	ERDS2TJ224	220kΩ	1
R102	ERDS2TJ152	1.5kΩ	1
R104	ERDS2TJ103	10kΩ	1
R105	ERDS2TJ102	1kΩ	1
R106, 107	ERDS2TJ272	2.7kΩ	2
R108	ERDS2TJ103	10kΩ	1
R109, 110	ERDS2TJ102	1kΩ	2
R111 ⚠	ERD2FCVG101	100Ω, 1/4W, Fuse Type	1
R112, 113	ERDS2TJ331	330Ω	2
R114 ⚠	ERD2FCVG101	100Ω, 1/4W, Fuse Type	1
R115 ⚠	ERD25FVJ4R7	4.7Ω, 1/4W, Flame-Proof	1
R120 ⚠	ERD2FCJ6R8	6.8Ω, 1/4W, Fuse Type	1
R201, 202 ⚠	ERD25FVJ4R7	4.7Ω, 1/4W, Flame-Proof	2
CAPACITORS			
C7	ECQV1H104JM	0.1µF	1
C8	ECQB1H223JF	0.022µF M MC XM	1
C8	ECQB1H103JF	0.01µF EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
C10	ECQG1H682KZ	0.0068µF	1
C11	ECCF1H331J	330pF M MC XM	1
C11	ECQB1H102JF	0.001µF EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
C12	ECQV1H104JM	0.1µF	1
C13	ECQG1H682KZ	0.0068µF	1
C14	ECQB1H223JF	0.022µF M MC XM	1
C14	ECQB1H103JF	0.01µF EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
C16	ECCF1H331J	330pF M MC XM	1
C16	ECQB1H102JF	0.001µF EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
C17	ECEA1HKA2R2	2.2µF, 50V	1
C18	ECQG1H472KZ	0.0047µF	1
C19	ECQV1H224JM	0.22µF	1
C20	ECQG1H332KZ	0.0033µF	1
C21	ECQV1H224JM	0.22µF	1
C22	ECQG1H332KZ	0.0033µF	1
C23	ECEA1HKA2R2	2.2µF, 50V	1
C24	ECQG1H472KZ	0.0047µF	1
C25, 26	ECCF1H220J	22pF	2
C28 ⚠	ECQE1A104M6	0.1µF, 125V	1
C29	ECEA1VU332	3300µF, 35V	1
C32	ECEA1VU222	2200µF, 35V	1
C36, 37	ECQV1H104JM	0.1µF	2
C38	ECEA1CKA100	10µF, 16V	1
C39	ECEA1CU331	330µF, 16V	1
C49	ECQV1H224JM	0.22µF M MC XM	1
C49	ECQV1H334JM	0.33µF EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
C50	ECQB1H223JF	0.022µF	1
C51	ECQV1H104JM	0.1µF	1
C54	ECQV1H224JM	0.22µF M MC XM	1
C54	ECQV1H334JM	0.33µF EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
C55	ECQB1H223JF	0.022µF	1
C56	ECQV1H104JM	0.1µF	1

ACP AC POWER SUPPLY CIRCUIT

Ref. No.	Part No.	Description	P/S
LINE FILTER			
L1 ⚠	SLTGLF3	Line Filter	1
JACK			
JK1 ⚠	SJVD0203B	AC Inlet	1
SWITCH			
S1 ⚠	SSRG100A	Voltage Selector, X XR XS XD XT	1
FUSES			
F1 ⚠	XBA1C40NU100	4A, 125V, M MC XM	1
F1 ⚠	XBA2C16TB0	T1.6A, 250V, X XR XS XD XT	1

	Ref. No.	Part No.	Description	P/S
	F2 ⚠	XBA2C10TB0	T1.0A, 250V, X XR XS XD XT	1
	F3 ⚠	XBA2C10TB0	T1.0A, 250V, EN EK EZ EW EF EA EH EP X XL XR XS XD XT	1
	CAPACITORS			
	C1 ⚠	ECKCVA1472MF	4700pF, Line Capacitor	1
	C2 ⚠	ECQU2A104MN	0.1µF, 250V, Across-the Line Capacitor, M MC X XR XS XM XD XT	1
	C2 ⚠	ECQU2A104MT	0.1µF, 250V, Across the Line Capacitor, EN EK EZ EW EF EA EH EP XL	1

HP HEADPHONES CIRCUIT

	Ref. No.	Part No.	Description	P/S
	COIL			
	L1	QLQGT3T150SA	Coil	1
	JACKS			
	JK1, 2	SJJG100A	Jack	2
	RESISTORS			
	R1~4 ⚠	ERG1ANJP680S	68Ω, 1W, Flame-Proof	4
	CAPACITORS			
	C1, 2	ECKF1E473ZV	0.047µF	2
	C3	ECRF1H104ZF	0.1µF	1

CP CONTROL PANEL

	Ref. No.	Part No.	Description	P/S
	INTEGRATED CIRCUITS			
	IC1	SVIGM603A121	Gate Array	1
	IC2, 4	HD74LS07P	Hex Buffers	2
	TRANSISTORS			
S	Q1~4	2SA1015-GR	2SA933STRS (SUB. Part)	4
	DIODES			
	D2, 5, 49~52, 58, 61~64, 66~71, 77	MA165	Diode	18
	D102, 150, 151, 158~164, 166~171, 205~207	LN282R	LED (Red)	19

	Ref. No.	Part No.	Description	P/S
	COMPONENT COMBINATION			
	Z1	EXBPI8103JM	10kΩ×8	1
	SWITCHES			
	S2, 5, 49~52, 58, 61~64, 66~71	EVQ21507K	Push Switch	17
	IC PROTECTOR			
	IP1 ⚠	ICP-N10T104	IC Protector	1
	VARIABLE RESISTOR			
	VR1	QRVG25P01B53	5kΩ B, Main Volume	1
	RESISTORS			
	R1	ERDS2TJ184	180kΩ	1
	R2	ERDS2TJ221	220Ω	1
	R3	ERDS2TJ152	1.5kΩ	1
	R4	ERDS2TJ102	1kΩ	1
	R5~8	ERDS2TJ152	1.5kΩ	4
	R9	ERDS2TJ103	10kΩ	1
	R10~12, 22~24, 26	ERDS2TJ680	68Ω	7
	R38, 39	ERDS2T0	0Ω, 1/4W	2
	CAPACITORS			
	C1	ECEA0JKA470	47µF, 6.3V	1
	C2	ECBA1H101KB	100pF	1
	C3	ECRF1H104ZF	0.1µF	1
	C4	ECEA1HKA010	1µF, 50V	1
	C5	ECBA1H101KB	100pF	1
	C11, 12	ECEA1CKN100	10µF, 16V	2

PKB PEDAL KEYBOARD CIRCUIT

	Ref. No.	Part No.	Description	P/S
	SWITCHES			
	S1, 3	QSTGT001AA	Lever Switch	2
	RESISTORS			
	R8, 9	ERDS2TJ472	4.7kΩ	2
	CAPACITOR			
	C1	ECRF1H104ZF	0.1µF	1

MKB1 MANUAL KEYBOARD 1 CIRCUIT

	Ref. No.	Part No.	Description	P/S
	INTEGRATED CIRCUITS			
	IC1	MSM7U042016	Gate Array	1
○	IC2	ST93C46CB1	1M bit Programmed EE PROM	1

	Ref. No.	Part No.	Description	P/S
	DIODES			
	D1~88	MA165	Diode	88
	OSCILLATOR			
	X1	SVQGA20MX040	20MHz, Ceramic Oscillator	1
	RESISTORS			
	R1~3	ERDS2TJ472	4.7kΩ	3
	CAPACITORS			
	C1	ECRF1H104ZF	0.1μF	1
	C2	ECCW1H471J5	470pF	1
	C3, 4	ECCW1H220J5	22pF	2
	C5	ECKR1E473ZV	0.047μF	1
	C6, 7	ECCW1H101J5	100pF	2

MKB2 MANUAL KEYBOARD 2 CIRCUIT

	Ref. No.	Part No.	Description	P/S
	DIODES			
	D89~176	MA165	Diode	88
	COMPONENT COMBINATION			
	Z1	EXBPI8332JM	3.3kΩ×8	1

JACK JACK CIRCUIT

	Ref. No.	Part No.	Description	P/S
	INTEGRATED CIRCUIT			
	IC1	SVIGTLP513	Photo Coupler	1
	TRANSISTORS			
S	Q1~3	2SA1015-GR	2SA933STRS (SUB. Part)	3
	DIODES			
	D1, 3, 4, 6, 7	MA165	Diode	5
	COILS			
	L1~5	QLQGT3T150SA	Coil	5
	JACKS			
	JK1	QJSG007AA	PEDAL IN	1
	JK2~4	SJSG1370A	MIDI	3
	JK5, 6	QJJG003AA	AUX IN	2
	JK7, 8	QJJG003AA	LINE OUT	2
	RESISTORS			
	R1, 2	ERDS2TJ102	1kΩ	2
	R4	ERDS2TJ473	47kΩ	1
	R5~7	ERDS2TJ102	1kΩ	3
	R8, 10	ERDS2TJ680	68Ω	2

	Ref. No.	Part No.	Description	P/S
	R11	ERDS2TJ104	100kΩ	1
	R13	ERDS2TJ151	150Ω	1
	R14	ERDS2TJ330	33Ω	1
	R15	ERDS2TJ104	100kΩ	1
	R16	ERDS2TJ221	220Ω	1
	R17	ERDS2TJ331	330Ω	1
	R18	ERDS2TJ103	10kΩ	1
	R21, 22	ERDS2TJ152	1.5kΩ	2
	R23, 24	ERDS2TJ102	1kΩ	2
	CAPACITORS			
	C1~4	ECRF1H104ZF	0.1μF	4
	C5, 6	ECCF1H221J	220pF	2
	C7	ECKF1E473ZV	0.047μF	1
	C8	ECEA1HKA010	1μF, 50V	1
	C11, 12	ECBA1C222MR	0.0022μF	2
	C13	ECRF1H104ZF	0.1μF	1
	C14, 15	ECBA1C222MR	0.0022μF	2
	C16	ECRF1H104ZF	0.1μF	1

■ WIRING PARTS

	Ref. No.	Part No.	Description	P/S
	W1	QEXGSS16065A	Connector with Wire	1
	W2	QEXGSS14030A	Connector with Wire	1
	W3	QEXGSS06085A	Connector with Wire	1
	W4	QEXGSS05025B	Connector with Wire	1
	W5	QEXGVH04070B	Connector with Wire	1
	W6	QEXGVH03105B	Connector with Wire	1

REPLACEMENT PARTS LIST......Cabinet and Chassis Parts

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retension period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.
   After the end of this period, the assembly will no longer be available.
2. ○ mark are new parts.
   Cabinet Colour
   • SX-PX203......Block • SX-PX203M......Walnat
3. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
4. For part No. with area mark, check the area when placing an order.
5. The raw material indication for synthtic resin
   In order to facilitate classification of parts of synthetic resin manufacture and to promote the recycling of natural resources, a raw material symbol for such parts is indicated in the Ref. No./Material column.

SX-PX203 CABINET & CHASSIS PARTS

	Ref. No.	Part No.	Description	P/S
			SWITCH	
	S1 ⚠	ESB823V	Power Switch	1
			DIODE	
	D1	SEL4214RLC05	LED, Power Indicator	1
			SPEAKERS	
	SP1, 2	EAS14PL93B	14cm, 8Ω	2
			TRANSFORMER	
	T1 ⚠	QTPG1M024A	Power Transformer, EN EK EZ EW EF EA EH EP XL	1
	T1 ⚠	QTPG1M022A	Power Transformer, M MC XM	1
	T1 ⚠	QTPG1M025A	Power Transformer, X XR XS XD XT	1
			POWER CORD & PLUG	
	PC1 ⚠	SJAG65	Power Cord, EN EZ EW EF EA EH EP X XS XT	1
	PC1 ⚠	QJAG013AA	Power Cord, M MC XM	1
	PC1 ⚠	QJAG014AA	Power Cord, XR XL	1
	PC1 ⚠	VJA0733	Power Cord, EK XD	1
	PC2 ⚠	SJP5213-1	Attachment Plug, X XT	1
			CABINET PARTS	
	1	QGAG1031AA	Music Stand	1
	2	SBLG230A	Stay	2
○	3	QKQGA096AA	Top Cover Ass'y	1
	3-1	QMRG7021AB	Sleeve	2
	3-2	QGKG0100AA	Ornament	1
○	4	QKQGF019AA	Keyboard Cover Ass'y	1
	4-1	QGKG0095AD	Ornament	1
	4-2	QMRG7032BC	Protector	1
	4-3	QMRG7031BC	Protector	1
	4-4	QXQG007AA	Axletree	1
	4-5	QMRG7026BA	Holder	1
	4-6	QMRG7026AA	Holder	1
	4-7	QWBG002AA	Holder	1

SX-PX203M CABINET & CHASSIS PARTS

	Ref. No.	Part No.	Description	P/S
			SWITCH	
	S1 ⚠	ESB823V	Power Switch	1
			DIODE	
	D1	SEL4214RLC05	LED, Power Indicator	1
			SPEAKERS	
	SP1, 2	EAS14PL93B	14cm, 8Ω	2
			TRANSFORMER	
	T1 ⚠	QTPG1M024A	Power Transformer, EN EK EZ EW EF EA EH EP XL	1
	T1 ⚠	QTPG1M022A	Power Transformer, M MC XM	1
	T1 ⚠	QTPG1M025A	Power Transformer, X XR XS XD XT	1
			POWER CORD & PLUG	
	PC1 ⚠	SJAG65	Power Cord, EN EZ EW EF EA EH EP X XS XT	1
	PC1 ⚠	QJAG013AA	Power Cord, M MC XM	1
	PC1 ⚠	QJAG014AA	Power Cord, XR XL	1
	PC1 ⚠	VJA0733	Power Cord, EK XD	1
	PC2 ⚠	SJP5213-1	Attachment Plug, X XT	1
			CABINET PARTS	
	1	QGAG1031AB	Music Stand	1
	2	SBLG230B	Stay	2
○	3	QKQGA096AB	Top Cover Ass'y	1
	3-1	QMRG7021AA	Sleeve	2
○	3-2	QGKG0100AD	Ornament	1
○	4	QKQGF019AB	Keyboard Cover Ass'y	1
	4-1	QGKG0095AC	Ornament	1
	4-2	QMRG7032BB	Protector	1
	4-3	QMRG7031BB	Protector	1
	4-4	QXQG007AA	Axletree	1
	4-5	QMRG7026BA	Holder	1
	4-6	QMRG7026AA	Holder	1
	4-7	QWBG002AA	Holder	1

SX-PX203

Ref. No.	Part No.	Description	P/S
○ 6 PS	QGPG0054BD	CP Ornament	1
7	QGPG0055AA	Control Panel	1
8	QQLG066BA	Initial Label	1
9	QMFG1107AA	Felt (Red)	1
10	SBNG7050A	Knob	1
11	QGUG1191AA	Button	1
12	QGUG1231AA	Button	1
13	QGUG1230AA	Button	1
14	QGUG1229AA	Button	1
15	QGUG1274AAK	Botton	1
17 PS	QMRG7028AC	Bracket	1
18 PS	QMRG7029AC	Bracket	1
19 PS	QGKG0076BB	External Jack Panel	1
20 PS	QGKG0096CB	AC Jack Panel, M EN MC EK EZ EW EF EA EH EP XL XM	1
20 PS	QGKG0096DA	AC Jack Panel, X XR XS XD XT	1
21 ⚠ PS	SJS9231A	AC Inlet Cover, EN EK EZ EW EF EA EH EP X XS XD XT	1
21 ⚠ PS	SJS9334A	AC Inlet Cover, M MC XM XL XR	1
22	QKSGG011AA	Keyboard Cover Guide, Right	1
23	QKSGG010AA	Keyboard Cover Guide, Left	1
24	QGKG0080AA	Headphone Jack Case	1
26	SGBG160B	Badge	1
27	QEXGRA01011A	Wire, M MC XM EZ	1
30	QKAG0012AA	Foot	2
STAND			
40	QKQGD066AA	Crossboard	1
○ 42	QKQGB368AA	Left Plank Ass'y	1
42-1	QKSGB006AA	Leg, Left	1
42-2	SHRG2130B-K	Foot	2
○ 43	QKQGB369AA	Right Plank Ass'y	1
43-1	QKSGB007AA	Leg, Right	1
43-2	SHRG2130B-K	Foot	2
○ 44	QKQGM063AA	Pedal Box Ass'y	1
44-1	QGKG0113AA	Ornament	2
45	SHRG1230A	Cord Clamper	1
46	SHRG9620A	Cord Clamper	2
47	QJLG007AA	Pedal Cord	1
51	QMBG009AA	Spring	2
52	QMFG1133AA	Felt	2
53	QKAG0011AA	Foot	1
54	QMWG3010BA	Pedal Chassis	1
57	QMWG4002AA	Pedal Arm	2
57-1	QMFG1135AA	Felt	2
57-2	QMFG1134AA	Felt	2
MANUAL KEYBOARD			
70 PP	SHRG8390A	Cover, Power SW.	1
71	QGUG1040AA	Button, Power Switch	1
72 PS	QGPG0042AB	End Cover Panel, Left	1
73 PS	QGPG0041BD	End Cover Panel, Right	1
74	QMFG1104AA	Felt	2
75 AS	QMWG1001AA	White Key (First Octave A Key)	1
76 AS	QMWG1002AA	White Key (B Key)	8
77 AS	QMWG1003AA	White Key (C Key)	7
78 AS	QMWG1004AA	White Key (D Key)	7
79 AS	QMWG1005AA	White Key (E Key)	7

SX-PX203M

Ref. No.	Part No.	Description	P/S
○ 6 PS	QGPG0054BD	CP Ornament	1
7	QGPG0055AA	Control Panel	1
8	QQLG066BA	Initial Label	1
9	QMFG1107AA	Felt (Red)	1
10	SBNG7050A	Knob	1
11	QGUG1191AA	Button	1
12	QGUG1231AA	Button	1
13	QGUG1230AA	Button	1
14	QGUG1229AA	Button	1
15	QGUG1274AAK	Botton	1
17 PS	QMRG7028AC	Bracket	1
18 PS	QMRG7029AC	Bracket	1
19 PS	QGKG0076BB	External Jack Panel	1
20 PS	QGKG0096CB	AC Jack Panel, M EN MC EK EZ EW EF EA EH EP XL XM	1
20 PS	QGKG0096DA	AC Jack Panel, X XR XS XD XT	1
21 ⚠ PS	SJS9231A	AC Inlet Cover, EN EK EZ EW EF EA EH EP X XS XD XT	1
21 ⚠ PS	SJS9334A	AC Inlet Cover, M MC XM XL XR	1
22	QKSGG011AA	Keyboard Cover Guide, Right	1
23	QKSGG010AA	Keyboard Cover Guide, Left	1
24	QGKG0080AA	Headphone Jack Case	1
26	SGBG160B	Badge	1
27	QEXGRA01011A	Wire, M MC XM EZ	1
30	QKAG0012AA	Foot	2
STAND			
40	QKQGD066AB	Crossboard	1
○ 42	QKQGB368AB	Left Plank Ass'y	1
42-1	QKSGB006AB	Leg, Left	1
42-2	SHRG2130B-K	Foot	2
○ 43	QKQGB369AB	Right Plank Ass'y	1
43-1	QKSGB007AB	Leg, Right	1
43-2	SHRG2130B-K	Foot	2
44	QKQGM059AB	Pedal Box Ass'y	1
44-1	QGKG0113AA	Ornament	2
45	SHRG1230A	Cord Clamper	1
46	SHRG9620A	Cord Clamper	2
47	QJLG007AA	Pedal Cord	1
51	QMBG009AA	Spring	2
52	QMFG1133AA	Felt	2
53	QKAG0011AA	Foot	1
54	QMWG3010BA	Pedal Chassis	1
57	QMWG4002AA	Pedal Arm	2
57-1	QMFG1135AA	Felt	2
57-2	QMFG1134AA	Felt	2
MANUAL KEYBOARD			
70 PP	SHRG8390A	Cover, Power SW.	1
71	QGUG1040AA	Button, Power Switch	1
72 PS	QGPG0042AB	End Cover Panel, Left	1
73 PS	QGPG0041BD	End Cover Panel, Right	1
74	QMFG1104AA	Felt	2
75 AS	QMWG1001AA	White Key (First Octave A Key)	1
76 AS	QMWG1002AA	White Key (B Key)	8
77 AS	QMWG1003AA	White Key (C Key)	7
78 AS	QMWG1004AA	White Key (D Key)	7
79 AS	QMWG1005AA	White Key (E Key)	7

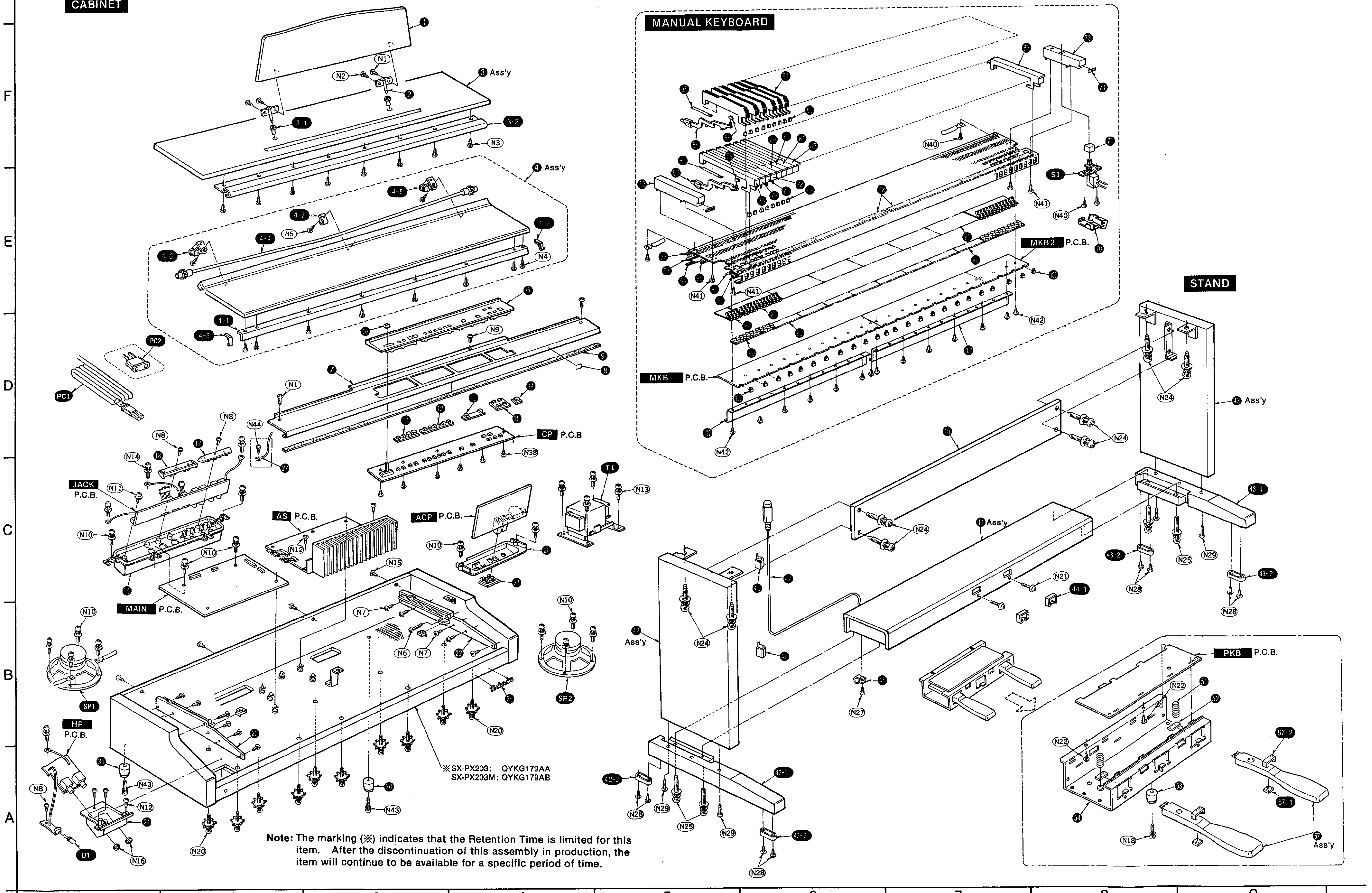
SX-PX203

Ref. No.	Part No.	Description	P/S
80 AS	QMWG1006AA	White Key (F Key)	7
81 AS	QMWG1007AA	White Key (G Key)	7
82 AS	QMWG1008AA	White Key (A Key)	7
83 AS	QMWG1009AA	White Key (Top Octave C Key)	1
84	QMWG2001AA	Black Key	36
85	SUSG534A	Spring	88
86	QMWG8019CA	Hammer (Black Key)	36
87	QMWG8017DA	Hammer (White Key)	52
88	SHGG9121A	Rubber Cap (Hammer)	88
89 PA	QMWG8024BA	Key Guide	88
90 ABS	QMWG8022AA	Fulcurum (4 pcs. on one)	1
91 ABS	QMWG8021AA	Fulcurum (12 pcs. on one)	7
92	SHRGA9080A	Sponge	2
93	QMFG1073AA	Felt	2
94	SHSG3461A	Felt	1
95	QMFG1101AA	Felt	2
96	QMFG1061AA	Felt	2
97	QMFG1060AA	Felt	2
98	QMFG1086AA	Felt	2
99	QMWG6006AA	Rubber Switch (8 pcs. on one)	11
100	SHRG9751A	P.C.B. Holder	24
102	SUWG3157A	Angle	2
SCREWS & WASHERS			
N1	XTT4+10AFZ	Screw	4
N2	XTB3+10AFZ	Screw	2
N3	XTT4+10A	Screw	8
N4	XTB35+12AFZ	Screw	8
N5	XTB4+10B	Screw	3
N6	XTN4+50AFZ	Screw	2
N7	XTB35+16A	Screw	10
N8	XTW3+10Q	Screw	3
N9	XTW3+10JFZ	Screw	1
N10	XYN4+F25	Screw with Washer	14
N11	XTWSG2	Screw with Washer	1
N12	XTB35+12A	Screw	7
N13	XYN4+F16	Screw with Washer	4
N14	SNEG2660A	Screw	4
N15	XTT4+30AFZ	Screw	4
N16	XNS12FZ	Nut	2
N18	XTN4+16F	Screw with Washer	1
N20	QHDG021AA	Screw with Washer	10
N21	XYN4+F16FZ	Screw with Washer	2
N22	XTT4+16A	Screw	2
N24	QHDG016AB	Screw with Washer	8
N25	XYN6+F40	Screw with Washer	4
N27	XTB35+14A	Screw	1
N28	XTB4+16A	Screw	8
N29	XTT4+25AFZ	Screw	4
N38	XTV3+10G	Screw	6
N40	XTV3+10C	Screw	4
N41	XTB4+12A	Screw	4
N42	XTW3+10T	Screw	14
N43	XTB35+20A	Screw	2
N44	SNEG2660A	Screw, M MC XM EZ	1
N45	SNEG2660A	Screw	4

SX-PX203M

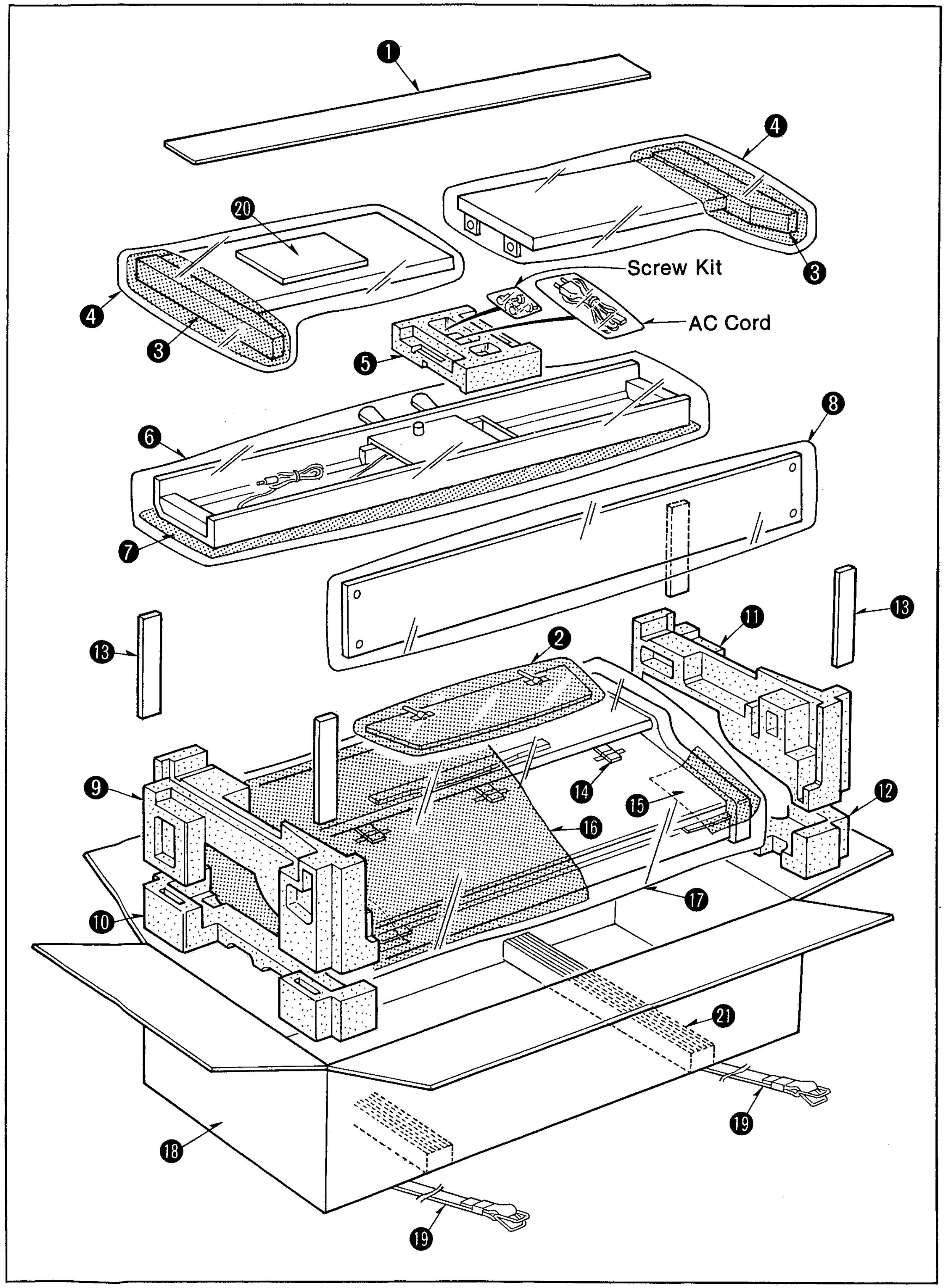
Ref. No.	Part No.	Description	P/S
80 AS	QMWG1006AA	White Key (F Key)	7
81 AS	QMWG1007AA	White Key (G Key)	7
82 AS	QMWG1008AA	White Key (A Key)	7
83 AS	QMWG1009AA	White Key (Top Octave C Key)	1
84	QMWG2001AA	Black Key	36
85	SUSG534A	Spring	88
86	QMWG8019CA	Hammer (Black Key)	36
87	QMWG8017DA	Hammer (White Key)	52
88	SHGG9121A	Rubber Cap (Hammer)	88
89 PA	QMWG8024BA	Key Guide	88
90 ABS	QMWG8022AA	Fulcurum (4 pcs. on one)	1
91 ABS	QMWG8021AA	Fulcurum (12 pcs. on one)	7
92	SHRGA9080A	Sponge	2
93	QMFG1073AA	Felt	2
94	SHSG3461A	Felt	1
95	QMFG1101AA	Felt	2
96	QMFG1061AA	Felt	2
97	QMFG1060AA	Felt	2
98	QMFG1086AA	Felt	2
99	QMWG6006AA	Rubber Switch (8 pcs. on one)	11
100	SHRG9751A	P.C.B. Holder	24
102	SUWG3157A	Angle	2
SCREWS & WASHERS			
N1	XTT4+10AFZ	Screw	4
N2	XTB3+10AFZ	Screw	2
N3	XTT4+10A	Screw	8
N4	XTB35+12AFZ	Screw	8
N5	XTB4+10B	Screw	3
N6	XTN4+50AFZ	Screw	2
N7	XTB35+16A	Screw	10
N8	XTW3+10Q	Screw	3
N9	XTW3+10JFZ	Screw	1
N10	XYN4+F25	Screw with Washer	14
N11	XTWSG2	Screw with Washer	1
N12	XTB35+12A	Screw	7
N13	XYN4+F16	Screw with Washer	4
N14	SNEG2660A	Screw	4
N15	XTT4+30AFVC	Screw	4
N16	XNS12FZ	Nut	2
N18	XTN4+16F	Screw with Washer	1
N20	QHDG021AA	Screw with Washer	10
N21	XYN4+F16FZ	Screw with Washer	2
N22	XTT4+16A	Screw	2
N24	QHDG016AA	Screw with Washer	8
N25	XYN6+F40	Screw with Washer	4
N27	XTB35+14A	Screw	1
N28	XTB4+16A	Screw	8
N29	XTT4+25AFZ	Screw	4
N38	XTV3+10G	Screw	6
N40	XTV3+10C	Screw	4
N41	XTB4+12A	Screw	4
N42	XTW3+10T	Screw	14
N43	XTB35+20A	Screw	2
N44	SNEG2660A	Screw, M MC XM EZ	1
N45	SNEG2660A	Screw	4

CABINET PARTS LOCATION


CABINET
MANUAL KEYBOARD
STAND
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
1
N1
N2
2
3 Ass'y
3-1
3-2
N3
4 Ass'y
4-5
4-7
N5
4-4
4-6
4-2
N4
4-1
4-3
6
N9
9
8
7
N1
PC2
PC1
N8
N8
N44
17
18
N14
27
JACK P.C.B.
N11
N10
19
AS P.C.B.
N12
N10
N15
MAIN P.C.B.
ACP P.C.B.
N10
CP P.C.B
N38
T1
N13
N10
SP1
SP2
HP P.C.B.
N8
N43
N12
D1
N16
N20
N7
N6
N7
N20
N43
※SX-PX203: QYKG179AA
SX-PX203M: QYKG179AB
N40
N41
S1
N40
MKB2 P.C.B.
N41
N41
N42
MKB1 P.C.B.
N42
N24
43 Ass'y
N24
43-1
N24
44 Ass'y
43-2
N25
N29
43-2
N28
N21
44-1
N28
42 Ass'y
N24
N27
PKB P.C.B.
N22
N22
57-2
57-1
57 Ass'y
N18
42-2
42-1
N28
N29
N25
N29
42-2
N28

Note: The marking (※) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time.

PACKING



■ PACKING PARTS

Ref. No.			Part No.	Description	P/S
PACKING PARTS					
	1		QPNG0358AA	Top Cardboard	2
	2	PE	SPHG1490A	Protection Sheet	1
	3	PE	SPHG1730A	Protection Sheet	2
	4	PE	QPFG011AA	Polyethylene Bag	2
	5	PS	QPNG0364AA	Pad	1
	6	PE	QPFG026AA	Polyethylene Bag	1
	7	PE	QPHG020AA	Protection Sheet	1
	8	PE	QPHG033AA	Polyethylene Bag	1
○	9	PS	QPNG0360CA	Pad	1
	10	PS	QPNG0361AA	Pad	1
○	11	PS	QPNG0362CA	Pad	1
	12	PS	QPNG0363AA	Pad	1
	13		QPQG024AA	Prop	4
	14		SPNG5161A	Spacer	3
	15	PE	QPHG018AA	Protection Sheet	2
	16	PE	QPHG028AA	Protection Sheet	1
	17	PE	SPHG2200A	Polyethylene Bag	1
○	18		QPGG0233AD	Carton, SX-PX203	1
○	18		QPGG0233AE	Carton, SX-PX203M	1
	19		SPSG40A	Band	2
OPERATING INSTRUCTION MANUAL					
○	20		QQFGPX203AA	Operating instruction manual, M	1
○	20		QQFGPX203BA	Operating instruction manual, EN	1
	20-1		┌ QQTG0299A	DANSK	1
	20-2		└ QQTG0301A	ENGLISH, FRANCAIS, ESPANOL, ITALIANO, NERDERLANDS, 中文	1
○	20		QQFGPX203CA	Operating instruction manual, MC EF EP X XL XR XS XM XD XT EK	1
○	20		QQFGPX203DA	Operating instruction manual, EA EZ	1
○	20		QQFGPX203EA	Operating instruction manual, EH EW	1
	20-1		┌ QQTG0301A	ENGLISH, FRANCAIS, ESPANOL, ITALIANO, NERDERLANDS, 中文	1
	20-2		└ QQTG0302A	DEUTSCH	1